Great Lakes Conservation TASK FORCE

2002 FINAL REPORT

The Citizens' Agenda. . .

An Action Plan to Protect the Great Lakes

Senator Ken Sikkema - Chairman
Senator Bev Hammerstrom - Vice Chairman
Senator Shirley Johnson
Senator Harry Gast
Senator Walter North
Senator Ken DeBeaussaert
Senator Dianne Byrum
Senator Gary Peters

Presented to
Senate Majority
Leader Dan L. DeGrow,
the Michigan State Senate, and
the Citizens of Michigan

January 2002

Dear Fellow Citizen:

With the submission of this report, as Chairman of the Great Lakes Conservation Task Force, I would like to personally convey my gratitude to the many individuals who made this undertaking so enriching.

First, my thanks are extended to the citizens of this state who provided testimony to the belief that the people of Michigan care deeply for the future of the Great Lakes. Your passion and commitment were keenly exhibited in the hearings and gave the Task Force the clear direction in which to head with policy changes. As noted, the findings and recommendations found in this report are in essence “your action agenda to protect the Great Lakes."

Second, I would like to acknowledge the true bipartisan spirit and nature of this report. Though the public may sometimes have the notion that issues in Lansing are often divisive, it has certainly not been the case with the proceedings of this Task Force. Senate Republicans and Democrats have come together to unite in the common cause to protect the Great Lakes. For this, I would like to thank all the members of the Task Force.

Finally, I would like to convey my thanks to all the people who worked so hard to provide suitable locations, materials, equipment, and general logistical support for the hearings. Whether meeting in public libraries, restaurants, school buildings, or town halls, the facilities that were provided more than met the needs of the Task Force.

It has been my pleasure to serve the citizens of Michigan in this effort. I look forward to your continued support as we work to make the changes you would like to see in Great Lakes policy.

Respectfully Yours,

Senator Ken Sikkema
Chairman, Great Lakes Conservation Task Force

Great Lakes Task Force Members

Senator
Ken Sikkema
Chairman

Senator Bev
Hammerstrom
Vice Chairman

Senator
Walter North

Senator
Shirley Johnson

Senator
Harry Gast

Senator Ken
DeBeaussaert

Senator
Dianne Byrum

Senator
Gary Peters

Dedication

The Great Lakes Conservation Task Force wishes to express its sincere appreciation to the many devoted and passionate stewards of the Great Lakes who took the time and energy to attend the eight public hearings held over the past three months. The purpose of the Task Force was to go out into the regions of the state to learn first-hand from those who know and love the Lakes so well what problems need to be solved, what ideas need to be considered, and how we could all work together to fashion a plan to conserve this wonderful resource. In this regard, the Task Force was genuinely impressed with the quantity and quality of the testimony it received. The report that follows is thus dedicated to those stewards of the Great Lakes.

In the words of Tim Eder, from the National Wildlife Federation, as he appeared before the Task Force at the final hearing in Saginaw:

"As I walked into this room, a number of thoughts hit me. First, I thought maybe I was in the wrong room and that I was at the monthly meeting of the Save Our Shoreline coalition. Then, when I realized I was indeed in the right place and that I would be here for a long time, I wondered when I might be getting home tonight.

But as I realized what was going on here with this huge crowd, it occurred to me that all of us — you Senators listening to this testimony and people like me who work for the protection of the Great Lakes — are incredibly lucky. How much more fortunate could we be? We've been given responsibility for stewardship of the most precious bodies of fresh water on the planet — full of fish, home to an amazing diversity of plants and animals, and ringed with the most beautiful coasts ever to be created. And, on top of that, we have this incredibly dedicated constituency behind us: people who are moved with such pride and passion for their Lakes that they filled this hall on a cold evening in November.

So I thank the Task Force for holding these hearings throughout the state, and for your endurance in listening to these many hours of testimony. And I also want to thank all of the people that came here tonight for the inspiration they bring to me and, hopefully, to you Senators to protect and restore these wonderful Lakes that are so much a part of all of our lives."

Acknowledgments

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The Citizens' Agenda . . . An Action Plan to Protect the Great Lakes.

The Great Lakes define the state of Michigan and its people. We live, work, and recreate on and around the Lakes, and the care and safeguarding of this critical natural resource has been an ongoing responsibility for all the citizens of the state. We rely upon the Lakes for so much; yet, we often have not taken the steps necessary as effective stewards. The problems of maintaining the quality of the water and the related resources are seen in the spread of aquatic nuisance species, raw and partially treated sewage and other pollutants pumped into our Lakes, and the loss of important habitat along and in the Lakes. Surely, we can do more to conserve this precious resource.

The Michigan Constitution charges the Legislature with the responsibility to protect and conserve the natural resources of the state from pollution, impairment, and destruction. Acting on this constitutional charge to protect the natural resources of the state and acknowledging that the Great Lakes are a cornerstone of the state's resource base, Senate Majority Leader Dan DeGrow commissioned the creation of the Great Lakes Conservation Task Force on August 16, 2001.

The Task Force conducted eight public hearings throughout the state and, after taking considerable oral and written testimony, issued a series of findings and recommendations which will serve as a catalyst for significant policy changes. Although high visibility issues such as directional drilling and water diversions often dominated the media surrounding the hearings, the Task Force members were impressed with the range of the testimony provided by the public. The Task Force learned much about issues such as the state of our Lakes fishery, the impacts of the Tribal Fishing Treaty, the presence of mercury in our Lakes, the lack of good water quality data throughout the state, the vast amount of sewage overflows still occurring, the practice of beach "grooming," the dangers of airborne toxics, jurisdictional conflicts in the basin, and the impact of concentrated animal feeding operations (CAFOs) on water quality.

But among the most significant lessons learned was the impact that the people of the state have had, and can continue to have, on making a difference in our Lakes. With the submission of this report, the Task Force has taken the ideas and thoughts of the citizens of Michigan and developed a blueprint to convey to other members of the Legislature. Many changes will need to be made to statutory law in Michigan. Other changes may involve a rewriting of the rules that govern state agency action. In other cases, more difficult certainly, Michigan policymakers must urge action at the federal level and in Canada and its provinces. But, ultimately, the greatest challenge may be in redirecting the minds and attitudes of those who do not care as passionately for our Lakes. But if policymakers reframe this mindset, much can be accomplished.

Finally, the Task Force wishes to acknowledge the contributions of the people who attended the hearings throughout the state. Over the course of ten weeks, twenty hours of oral testimony and many pages of written testimony were provided to the Task Force as hundreds of Michigan citizens took time out of their busy daily schedules to convey their concerns with the health of the Lakes and how state and federal policy could be reshaped to develop a new plan to conserve the Great Lakes. Ultimately, it will be their passion that will be the real fuel for change.

Therefore, it is with pride and an acknowledgment of the efforts of the citizens of Michigan that the Task Force presents The Citizens' Agenda. . . An Action Plan to Protect the Great Lakes.

Issue

Aquifer Protection, Diversion, and Water Withdrawal

Findings

There is an immediate need for an aquifer protection statute to protect the public and the environment from both present and future problems caused by water withdrawals. Several other states in the Great Lakes region have implemented such laws. Such a law must include the mapping of aquifers, as well as thresholds of use for registration and regulation purposes. The law must give the state the ability to refuse permits for water withdrawals so intense that they threaten the public interest or the environment. Where significant withdrawals are permitted, they must be required to adhere to the three key principals of Annex 2001: preventing harm to the Great Lakes resource, conserving this vital resource, and, ultimately, enhancing it. Of course, any new law regulating withdrawals or diversions must be able to withstand legal challenge; therefore, it must be even-handed in the promotion of conservation both within and outside of the Great Lakes basin.

In addition, there is a need for a much deeper understanding of the Great Lakes and their ecosystems. Any water use statute will benefit from a fuller understanding, and it is likely that any law enacted in the near future will need to be fine tuned as more is known about the dynamics of the Lakes and their watershed as a whole.

Recommendations

1. *The Legislature should enact comprehensive water withdrawal laws. This process may require a step-by-step approach, beginning with the enactment of an aquifer protection statute.*
2. *The Legislature should also promptly enact any implementation laws arising from the consummation of the Annex 2001 process.*

Issue

Municipal Sewage Control

Findings

There is a general consensus that sewage overflows is one of the most serious problems facing the health of our Lakes today. More funding and technical assistance should be made available to local units of government as they seek to manage their sewage problems. The problems being faced at this time are exacerbated by continual growth and expansion. Even liberal estimates to fix the state's sewage management problem of $20 billion to $50 billion often do not fully address all anticipated growth. The state could do much to help in this regard by making funding of the State Revolving Fund (SRF) a priority, coordinating a statewide inspection program for on-site sewage disposal systems (OSDS), and ensuring that state enforcement agencies have a system in place that allows for identification and then aggressive enforcement against polluters.

Recommendations

1. *Make funding of the SRF a key priority through consideration of either an issuance of General Obligation Bonds or through a dedicated revenue source.*
2. *Legislation should be considered that in order to access the SRF, applicants must be able to show that a growth management plan is in place that demonstrates the capacity of the current sewer infrastructure to accommodate projected growth.*
3. *Require the Department of Environmental Quality (DEQ) to make it a chief priority of its Strategic Water Quality Monitoring Program to work with local water quality monitoring efforts to identify all significant illicit sewer connections and other point sources of sewage discharge.*
4. *Implement a statewide OSDS inspection program to be conducted by local officials. There may be Headlee implications in mandating such a program, but a local inspection program could be motivated by allowing the DEQ to issue grants to fund*

program development.

5. *Provide additional incentives for municipalities within a particular watershed or region to coordinate sewage management plans.*

Issue
Directional Drilling Beneath the Michigan Waters of the Great Lakes

Findings

There is significant public opposition to the practice of directional drilling beneath the Great Lakes. Risk of contamination to the waters of the Great Lakes is relatively small, but the impact on shoreline environments and other shoreline uses is greater. All the safeguards recommended by the Michigan Environmental Science Board (MESB) have not been implemented by the Department of Natural Resources (DNR). Few, if any, are actually in statute or rules. The decades-old practice of leasing lands and later conducting environmental impact assessments on well drilling applications potentially subjects the state's taxpayers to serious financial liability.

Recommendations

1. *Implement all MESB recommendations into statute.*
2. *The potential financial liability to the taxpayers presented by the current process of leasing and then deciding on actual drilling permits must be eliminated.*
3. *While some task force members would urge an immediate ban,a moratorium on directional drilling should be imposed to implement recommendations 1 and 2, and to allow an opportunity for further public discussion regarding the wisdom of permitting any further drilling and under what circumstances it could occur.*

Issue
Water Quality Monitoring and Beach Closings

Findings

There is a general consensus that there is an immediate need for more state funding and state technical support for a consistent, coordinated, and comprehensive water quality monitoring program. These efforts should further support the emerging successes found in local water quality testing programs. Although recent changes in the DEQ's water quality monitoring strategy have and should produce more successes, the state needs to, at the very least, continue to consistently support the scope of this program and to regularly assess the state's most critical needs in order to revise the strategy. Beyond that, there is the general thought that more detailed information than is contemplated in that program might be needed to further assist in some local water quality programs.

The repeated number of beach closings is a dramatic signal that more information needs to be available to help clean up the waters of the state and prevent further shutdown of the public's access to those waters. Focusing on the monitoring needs of local swimming beaches should be a priority for the state.

Recommendations

1. *The DEQ's Strategic Water Quality Monitoring Program needs to contain a mechanism for regular updating based on current or emerging needs. Updating of this strategy should be done on a regular basis, such as every three years. This program is based largely on findings from the Auditor General in its 1995 report to the Legislature on the Surface Water Quality Division for the period October 1, 1992, through June 30, 1994. Local water quality "partners" must be invested in the regular update of this strategy to ensure that local data needs are being met.*
2. *A consistent, stable, long-term funding source is needed to prevent the haphazard nature of the state's water quality monitoring efforts. The Legislature needs to continue to support this program with a dedicated funding source. Bonding should not be considered as a funding option. There has been cyclical funding of water quality monitoring in the past, and it has had a serious impact on the program's ability to produce necessary data.*

3. *The Water Quality Monitoring Program must be linked directly to the National Pollutant Discharge Elimination System (NPDES) permitting program in order to provide that program with a reliable and consistent data source. Designing and updating of the Water Quality Monitoring Program must take this need into account.*
4. *The DEQ cannot conduct a statewide comprehensive Water Quality Monitoring Program on its own. The department must continue to support, both with technical expertise and funding, local water quality monitoring programs. These local programs should be coordinated on a regional watershed basis.*
5. *The Legislature should consider enacting a "statewide beach users protection" statute. Such legislation should include a program for monitoring water quality at state-owned beaches, and should provide a coordinated and consistent system for taking water samples at other beaches and then issuing beach advisories and closings as needed. Local public health officials need to be able to work closely with state officials for information gathering and analysis when needed. Monitoring information should be used to identify violators and remedy the contamination through prosecution, permit revocation, or other means. Such a beach users protection statute would protect the public while helping to discourage violations through vigilant monitoring, hopefully leading to fewer discharges and fewer closings.*
6. *The DEQ must continue to update its web site that reports on beach closings and advisories and to use this information in tracking progress made in identifying and reducing the number of illegal discharges.*

Issue

Aquatic Nuisance Species

Findings

A coordinated, basin-wide, and adequately enforced regulatory scheme is needed to control the spread of aquatic nuisance species (ANS). Critical in this regard is the elimination of the federal rule which exempts ballast water discharges from the Clean Water Act (CWA). State action which further encourages the development of a federal policy should also be supported.

Recommendations

1. *Urge the Michigan Congressional Delegation to take the lead in the repeal of 40 CFR section 122.3(a), the current CWA exemption for the regulation of ballast water.*
2. *Public Act 114 of 2001 provides a model for state legislation across the Great Lakes basin. The passage of similar legislation in the other Great Lakes states and provinces will lead to an approved technology to treat ballast water and create the impetus for federal action.*
3. *Work to establish a new Great Lakes Legislative Caucus to create an aggressive basin-wide ANS program implemented at the state, provincial, and federal level.*
4. *Public education efforts need to be increased in order to fully inform the public of the steps that individuals can take to reduce the spread of ANS. More effective notification at boat access sites, boat dealerships, marinas, and other areas could help enlist the aid of the general public in curtailing the spread of ANS. This should be a priority.*

Issue

Off-Shore Drilling in the Canadian Waters of the Great Lakes

Findings

Off-shore drilling practices in Canada are inconsistent with current U.S. basin practices and have greater potential to harm the Lakes than directionally drilled wells.

Recommendations

1. *Request the Michigan Congressional Delegation to make the ban of off-shore drilling practices a priority item in Washington.*
2. *Send a resolution to Environment Canada, the leaders of the Ontario Provincial, and the federal Canadian governments urging the prohibition of off-shore drilling in the*

Canadian waters of the Great Lakes.

3. *Ask the International Joint Commission to assess the potential for harm to the Lakes from off-shore drilling and, if it confirms that it poses significant threats, ask the Commission to mediate a request from Michigan that the practice of off-shore drilling be prohibited throughout the waters of the basin.*

Issue

Pipeline Transport of Oil and Gas in the Great Lakes

Findings

Pipeline transport of oil and natural gas occurs throughout the Great Lakes basin including within the Lakes themselves. A complex and interconnected set of federal and state rules regulate the construction, maintenance, monitoring, and safety aspects of these pipelines. Breaks and spills are infrequent, but they have occurred in the past.

Recommendation

1. *There should be a complete review of pipeline safety, monitoring, and inspections by the Michigan Public Service Commission. This review should include a clear definition of what the state role is and can be in the regulation of oil and gas pipelines.*

Issue

Commercial and Recreational Vessel Petroleum Spills

Findings

Although spills from large commercial vessels have occurred and are always possible, the smaller, more numerous spills from recreational watercraft pose more of a problem on a consistent basis. U.S. and Canadian reporting protocols are inconsistent.

Recommendations

1. *Establish more effective education methods to alert recreational watercraft owners to the dangers of smaller spills, such as notices on marina gas pumps and at the time of sale of marine engines and watercraft. Further publicize both the current United States Coast Guard (USCG) and DEQ spill response hotline.*
2. *Encourage greater coordination between the USCG and state and local enforcement agencies on "smaller" spill response.*
3. *Consider implementation of anti-spill refueling devices on either vessels or at the gas pump.*
4. *Ask the International Joint Commission to conduct an analysis of Canadian and U.S. spill reporting protocol and make recommendations to the appropriate bodies for changes to ensure a consistent, basin-wide response.*

Issue

NPDES Permitting System

Findings

There is a general perception that more needs to be done by the DEQ in reviewing both current and new permits under the NPDES program, along with a more aggressive enforcement of permit conditions to help to ensure a reduction in point source discharges and the elimination of new sources. The department has made significant reductions in permitting backlogs, but maintaining a vigilant program would be greatly assisted by a new funding source coming from fees assessed against permitted discharges.

Recommendations

1. *Consider implementing a NPDES permit fee which covers initial and renewal application review, surveillance, monitoring activities, and enforcement costs.*
2. *The state must conduct a more thorough and comprehensive review of the entire Michigan NPDES program to ensure that this 30-year-old program is focused on current water quality problems. In addition, there must be continued legislative scrutiny over the NPDES permitting backlog and the number of expired NPDES permits still in effect and general DEQ enforcement of NPDES permits.*
3. *Change the NPDES permit application process to require the applicant to first demonstrate that all reasonable steps have been taken to prevent point source pollution.*

4. *The NPDES permit program should be linked directly to the DEQ's Water Quality Monitoring Program in order to provide a reliable data source for the issuance and monitoring of NPDES permits.*

Issue

Enforcement of Environmental Protection Laws

Findings

It appears to some segments of the public that enforcement of environmental laws is inadequate. While in many instances these concerns would be more properly focused on policy disagreements and differences of interpretation, in some instances legitimate enforcement issues have arisen, at times due to inadequate staff. In fact, state agency staff are said to have publicly commented in at least one situation that was related to the Task Force that staffing is not adequate to discharge the agency's responsibilities to the public. Because the power of appropriation is held by the Legislature, it is primarily the Legislature's responsibility to conduct adequate oversight to ensure that enforcement activities are properly funded.

Recommendations

1. *The Legislature should insist on full staffing of enforcement agencies. The legislative committees with responsibility for environmental enforcement issues need to take an active role in overseeing enforcement efforts to ensure they are adequate.*
2. *The Appropriation Subcommittees for the Departments of Natural Resources and Environmental Quality, in particular, should closely examine the question of what resources are needed to properly enforce existing protection laws and work to develop budget recommendations that reflect those needs.*
3. *TheExecutive Branch needs to carefully assess enforcement needs and push for the resources to fulfill those needs during the appropriations process.*

Issue

Airborne Toxics

Findings

Some toxic substances that have been banned in the United States and Canada will gradually be cleansed from the Lakes through natural or human actions. However, the long-term health of the Great Lakes and the organisms that depend on them, including human beings, have the potential of being seriously compromised by the continued emission of airborne pollutants such as dioxins and mercury.

Recommendations

1. *Airborne toxics must be reduced. Mercury, in particular, poses a severe threat that must be fully addressed. Coal-burning power plants must be required to reduce their emissions of toxic substances.*
2. *Operators of waste incinerators must reduce the amount of materials burned that introduce toxic substances into the air.*
3. *We must continue to search for less harmful alternatives to products that contain toxic substances.*
4. *To promote a better public understanding of some of these challenges, the state's biennial report on the state of Michigan's environment should include additional indicators of mercury contamination and other pollutants.*

Issue

Areas of Concern

Findings

The Areas of Concern program has played an extremely valuable role in focusing sustained efforts on both preventing the further degradation of and the clean up of some of the most serious pollution problems in and around the Great Lakes. The specific source and nature of some of the most pernicious contamination problems have been identified, further contamination has been prevented, and, in some cases, significant progress has been realized in restoring these sites to good environmental health.

However, a modest investment of resources by the state would result in faster progress by empowering both state and local public advisory councils and by harnessing available federal assistance. Questions arise regarding why the DEQ has not played a more significant role in supporting and promoting the Areas of Concern program.

Recommendations

1. *The state needs to play a more aggressive role in supporting the Areas of Concern program.*
2. *If the state continues the policy of placing the local public advisory councils in the position of asserting primary responsibility for clean-up efforts, more technical assistance must be afforded to the local council by the state.*
3. *Where matching federal funds are available, the state needs to make the effort to qualify for these funds as this support is essential to completing Remedial Action Plans and delisting sites.*

Issue

Land-Based Issues

Findings

The water quality of the Great Lakes is intimately connected to activities that occur on land. Whether it is the elimination of wetlands, the paving over of open spaces, the unlawful discharge of animal manure into the state's waters from animal feeding operations, the creation of large numbers of on-site sewage disposal systems, or the mining of coastal sand dunes, there needs to be a fuller appreciation of the interconnections between the land and the water. While significant progress has been made in protecting and improving the water quality of the Great Lakes, such progress threatens to be seriously undermined by new challenges relating to the interface between land and water. In addition, the state must work harder to find a balance between preserving habitat during periods of low water levels and recognizing the desires of beachfront homeowners to have access to clean, sandy beaches.

Recommendations

1. *The wetlands inventory called for in current law should be completed.*
2. *The Legislature must review the wetlands law, including the mitigation policy, and the status of enforcement policy in Michigan.*
3. *The Legislature must review the need for comprehensive new laws that require the protection of sensitive coastal areas as an integral part of the planning and zoning process.*
4. *A comprehensive water quality monitoring program that includes the monitoring of rivers and streams adjacent to concentrated animal feeding operations would allow for efficient and fair enforcement of laws forbidding illegal discharges.*
5. *New laws are needed to prevent the human population density of developing areas from exceeding the carrying capacity of existing or planned water infrastructure facilities.*
6. *The needs of beachfront homeowners must be given reasonable and consistent consideration when habitat protection laws are enforced.*

Issue

Fishery Health and Management

Findings

The health of the fishery is a widespread concern of Michigan's citizens. There are human health concerns associated with fish advisories as well as ecosystem concerns associated with the impact ANS have on the food web. The state needs to work to gather more information from creel surveys and to conduct more research on hydroelectric dams and their impact on the fishery. Steps should be taken to ensure that sound science is used in the management of the fishery.

Recommendations

1. *Review the current Michigan Fish Advisory to see whether it is consistent with other basin state advisory programs. Look for new ways to inform the public of fish advisories,*

possibly through postings at boat ramps and popular fishing locations.

2. *Ask the DNR to review its dam management program to ensure that fishery health is properly taken into account when decisions about dam removal and/or maintenance are made.*
3. *Consider the establishment of a local creel survey program that would supplement the current DNR fishery surveys. This local component would work with DNR information- gathering methods to ensure a consistent base of statewide information. This information must then be effectively communicated throughout the state.*
4. *Consider legislation similar to the proposed Aquatic Species Protection Act to ensure that long-term management decisions are made in the best interest of the health of the fishery.*

Issue

Recreational and Commercial Access to the Lakes

Findings

The state must continue to provide safe and enjoyable opportunities to access the Great Lakes, both for recreational and commercial use. Fluctuating water levels and other changing conditions in the Great Lakes present a real threat to both commercial and recreational access to the Lakes. In addition, there are many varied recreational and commercial uses of the resources in the basin that must be managed properly to ensure that one group or use does not deprive other users of an equal right to access in the basin.

Recommendations

1. *Review the joint dredging permit program to determine whether certain permit applications can be expedited.*
2. *The DNR's public access program, as referenced on their current web site, is dated 1995-96. This public access program should be reviewed to determine whether the department can do even more to locate new opportunities for public access.*
3. *Fish net marking requirements need to be reviewed. Although the net marking requirements found in the recent Tribal Fishing Consent decree are outside of legislative purview, there are outdated state law marking regulations that could be revised.*
4. *Implement a new commercial fishing fee that covers the real costs of this activity on the fishery, thereby reducing the state's reliance upon fees paid by recreational fishermen.*

Issue

Federal, State, Local, and International Interactions in the Great Lakes Basin

Findings

There are significant local, state, federal, and international interests at work in the Great Lakes basin, each having jurisdictional issues that need to be addressed. However, the multi-jurisdictional nature of the basin should not be an excuse for Michigan not to exercise its own authority to act in the interests of protecting the Great Lakes. Michigan can and should be a leader in shaping basin resource policy.

The efforts of local and state governing bodies can and have resulted in important improvements to the Lakes. These efforts need to be supported and further encouraged. However, all share a common interest in coordinating a broader vision for the welfare of the Great Lakes. All affected governing bodies in the basin need to recognize that a coordinated plan to preserve the integrity of the Lakes should be a key priority, particularly in light of impending attempts to remove water from the basin. Passage of Annex 2001 should be held as a key priority for these bodies and should be used to provide a foundation for additional coordination of future Great Lakes policy.

Recommendations

1. *Consideration should be given to the idea of creating a Great Lakes Legislative Caucus, which would help to facilitate meetings of key state and provincial policymakers within the basin to discuss innovative new programs that have the potential for application to other*

states. The Environmental Council of the States (ECOS) program at the federal level has demonstrated that innovative new programs developed at the state level can provide significant national level improvements.

2. *An appropriate body, such as the Great Lakes Commission or the International Joint Commission, should continue to provide basin-wide perspectives on where gaps or inconsistencies exist in basin policy. This body would then continue to make recommendations for changes to the appropriate regulatory programs to ensure a consistent basin policy.*
3. *Annex 2001 should be made a priority for prompt passage as a strong and urgent signal to Washington that the integrity of the Great Lakes must be maintained and that there are significant forces engaged to protect the basin from diversions.*
4. *Michigan should be a leader in shaping both ratification language and accompanying legislation in order to effectuate implementation of Annex 2001.*
5. *Binational efforts within the basin must be maintained and further encouraged. They demonstrate the value of a partnership approach to protecting the Lakes and allow for an expanded vision of the worth of the Great Lakes.*
6. *All basin states and provinces should work to establish a common Great Lakes web site that would be used to house all research and documents related to the proper management and protection of the Great Lakes.*

Issue

Public Access and the Role of an Educated Citizenry

Findings

The people of Michigan live, work, recreate, and care passionately about the Great Lakes and the natural resources of the state and want to play an important stewardship role. This human resource is a vital tool that the state must acknowledge in its policymaking efforts. The Legislature and other policymaking bodies at the state level need to continue to reach out to the people of the state to assess their needs, ideas, and concerns. In doing so, the state has a role to play in supporting education and outreach activities that keep the people engaged in the process of protecting the Great Lakes.

Recommendations

1. *Views, ideas, and concerns of the public must be accessed on a regular basis to help to fashion new policy in Lansing. Out-state hearings on critical issues need to remain a viable tool for hearing what the people of Michigan want.*
2. *Web-based questionnaires should be used regularly by policymakers to obtain valuable input from the citizens.*
3. *It is important that the state continue to take steps to provide information to the public. The DEQ web site is a good example of providing ready access to reports, backgrounders, public hearing calendars, and other information. The Legislature should attempt to ensure that the public first understands the intricacies of the policymaking process and then has reliable information that will allow it to make reasoned decisions.*
4. *More steps need to be taken to support environmental education efforts in our schools. Innovative teachers and teaching methods that convey important information on water quality to our students need to be the rule rather than the exception. The Michigan Environmental Education Act could be amended to allow for a focus on the Great Lakes natural resources issues and the Michigan Environmental Education Fund could be used to provide grant dollars of support for innovative teaching projects in this regard.*

Introduction

It is a mantra that has been repeated often by policymakers in Michigan that the Great Lakes are Michigan's most significant natural resource. The Lakes certainly define the state and its people, and most will also acknowledge that the health of the Lakes is inextricably linked with the welfare of the state and its people.

The Lakes, thousands of years old and shaped by the forces of nature, hold tales of past generations that have used the Lakes for a variety of purposes — for travel, transport of commodities, recreation, consumption, and to sustain economies in numerous ways. We have relied upon the Lakes to sustain our quality of life.

For many years, the people of this state and other basin states and provinces have often assumed that the health of the Great Lakes is largely self-sustaining. The magnitude of this resource is so great, and many of the activities so minimal in individual impact, that policymakers concluded that relatively little intervention was needed to properly conserve them.

But times have changed, and the signs are found throughout the Lakes:

Foreign invaders in the form of aquatic nuisance species threaten to expose the Great Lakes' ecosystem to irreparable harm.

Millions of gallons of raw sewage taint our waters every year.

Airborne toxics drift through the atmosphere depositing their harmful poisons in our Lakes.

Fish advisories warn us that it is harmful to eat the fish caught in the Lakes.

The possibility of water diversion for commercial use outside the basin has the potential to further threaten the long-term health of the Lakes.

The unintended consequences of various land use policies continue to pose risks to our coastal wetlands, sand dunes, and water quality.

Fluctuating Lake levels have caused marinas and harbors to be shut down.

Regular beach closings throughout the year close out access to the Lakes.

The risks of off-shore hydrocarbon drilling remain real in Canadian waters.

These problems are not mere perception nor unfounded headlines in a local paper but real, significant threats that must be acted upon to ensure the proper protection of the Great Lakes. The Great Lakes are threatened not only by pollution and other human activities that result in harm to the Lakes but by political and policy quandaries that have often caused policymakers to fail to take proper measures to conserve them.

The real question is not whether the Lakes have serious problems but who will take on these caretaking duties and what changes will be called for by these leaders.

Article IV, Section 52 of the Michigan Constitution clearly identifies the policymaking body that is ultimately responsible for the protection of the natural resources of Michigan as the Legislature. In their wisdom to make appropriate changes to the Constitution in 1963, the delegates drafted, and the voters ratified, this article to ensure the accountability of our Legislature to the citizens of Michigan for the protection of the natural resources.

Section.52. "The conservation and development of the natural resources of the state are hereby declared to be of paramount public concern in the interest of the health, safety, and general welfare of the people. The legislature shall provide for the protection of the air, water and other natural resources of the state from pollution, impairment and destruction."

Concordant with this privilege to safeguard the Lakes and the entire resource base comes the responsibility to take prudent and timely measures to act as proper stewards. Acting on this constitutional charge to protect the natural resources of the state, and acknowledging that the Great Lakes are a cornerstone of the state's resource base, on August

16, 2001, Senate Majority Leader Dan DeGrow commissioned the creation of the Great Lakes Conservation Task Force.

In a press release announcing the Task Force, Senator DeGrow identified the two most important resources in the state — the Great Lakes and the people of the state:

"The Great Lakes are the state's most valuable resource next to its people," said Senator DeGrow. "That's why we think it's important to hold these hearings so we can identify current and future threats to the Lakes and ensure they are clean."

This Task Force, chaired by Senator Ken Sikkema,

> "The Great Lakes are the state's most valuable resource next to its people," said Senator DeGrow.

was established as a method for assessing the health and the conditions of the Lakes by going out into the various regions of the state and asking those who live, work, and recreate along the Lakes to "tell us what we need to do to protect the Lakes." Other Task Force members include Senator Bev Hammerstrom from Temperance (Vice-Chair), Senator Gary Peters from Bloomfield Township, Senator Walter North from St. Ignace, Senator Dianne Byrum from Onondaga, Senator Harry Gast from St. Joseph, Senator Ken DeBeaussaert from Chesterfield Township, and Senator Shirley Johnson from Royal Oak.

Rather than taking a traditional approach of soliciting opinions from those who would need to travel great distances into Lansing to make their opinions and ideas known to the members of the Legislature, the members of the Task Force worked to establish an aggressive eight-hearing schedule. This schedule took the Task Force into all corners of the state to seek out those who care for and respect the Lakes and to learn from them what steps need to

> "Tell us what we need to do to protect the Lakes."

be taken to craft a plan to preserve the Lakes. The hearings were held over a ten-week period of time and included stops in Traverse City, Rogers City, Roseville, Monroe, Marquette, Port Huron, St. Joseph, and Saginaw.

The eight scheduled hearings began in Traverse City on September 13 and concluded with the hearing held in Saginaw on November 26.

Throughout the eight public hearings held in libraries, town halls, municipal buildings, university settings, restaurants, and other public buildings, the Task Force was presented with wonderful lessons in learning not just about the Great Lakes but about the people who live and work along the Lakes — and the passion and pride that they take in caring for them. Farmers, fishermen, students, professors, research scientists, ordinary citizens, association representatives, boaters, city engineers, cottage owners — all took the time to carefully think out their positions and their beliefs and communicate them to the Task Force.

The report that follows is a work dedicated to the people of this state. Because it is written largely based on the testimony provided by those people, it is their story and their thoughts that are found within this report. Ultimately, it will be their passion and commitment to the Lakes that will serve as the real fuel for change.

The Natural Resources of the Great Lakes

The Great Lakes are the largest system of surface freshwater in the world. The five Great Lakes and their connecting waters hold 6 quadrillion gallons of water, enough to cover the entire United states with water over 7 feet deep. This water represents 90 percent of the United States' surface freshwater supply. The Great Lakes basin (the surface area of the Great Lakes and the land draining into the Lakes) covers more than 295,000 square miles and is home to over 33 million people in the United States and Canada. Michigan borders on four of the five Great Lakes. Over 40 percent of the Great Lakes is under Michigan's jurisdiction. Nearly every drop of water that rains or snows on Michigan's lands eventually flows into the Great Lakes. Thus, the Great Lakes affect all aspects of life in Michigan, and all of Michigan's citizens can influence the Lakes.

The Great Lakes provide abundant freshwater for agricultural, industrial, commercial, and domestic use. Michigan's citizens use the Great Lakes for drinking water and irrigating Michigan's farms. Around 40 commercial ports and more than 80 recreational harbors are located on Michigan's Great Lakes shoreline. Great Lakes shipping carries raw materials such as iron ore and coal to and from Michigan. Michigan has the largest number of registered watercraft in the United States, more than 1 million. Over 30,000 slips have been constructed with Great Lakes access to accommodate these boats. Michigan's 103 hydroelectric power facilities harness the energy in flowing water to generate electricity.

The use of the Great Lakes and its freshwater depends on the continued abundance of this water. Many uses along with natural water level fluctuations can affect the amount of water that may be available in the future. Water withdrawn from rivers, lakes, and groundwater for power production, drinking water, and irrigation may never return to the Great Lakes. It is estimated that more than 2.7 billion gallons of water are consumed daily in the Great Lakes basin. Furthermore, 13 approved water diversions move water into and out of the Great Lakes basin as well as between the individual Great Lakes. These diversions daily bring about 1.5 billion gallons of additional water into the Great Lakes. However, the consumptive uses and diversions are still dwarfed by the natural Great Lakes water gains and losses estimated at more than 270 billion gallons per day. Annual changes in water gains and losses produce the dramatic rising and falling water levels during the year and over many years.

Great Lakes water quality is affected by how we use the Lakes. In turn, water quality influences how we may use the Lakes. Poor water quality can limit the use of the Lakes for drinking, swimming, and fishing. In general, the Great Lakes have good to excellent water quality. Since the 1970s, major efforts by government, industry, and citizens have improved water quality to the present point. Federal and state permits limit pollution from industrial sites, sewage treatment plants, and other sources. However, pollutants still enter the Great Lakes and degrade water quality in some areas.

Many pollutants come from so-called point sources that discharge polluted water to lakes, rivers, and groundwater from a specific, easily identified point like a pipe outlet. Sewage overflows from municipal sewer systems can contaminate water with organic matter, excess nutrients, toxic contaminants, and pathogens (disease-causing organisms). In 2000, over 48 billion gallons of raw or insufficiently treated sewage were discharged into Michigan's waterways, including the Great Lakes. Accidental spills may release oil or dangerous chemicals into the Lakes. Failing septic systems can contaminate groundwater and nearby lakes and rivers with pathogens and excess nutrients.

Other pollutants come from less obvious sources without a direct connection to the Great Lakes. Toxic contaminants may enter the Lakes from the air. Rain and snowmelt can wash pesticides, fertilizers, manure, oil, soil, and other pollutants from farms, construction sites, golf courses, paved streets, and

residential lawns into the Great Lakes and rivers flowing to the Lakes. The cumulative impact of these numerous, smaller pollution sources can have major water quality impacts.

Finally, many remaining water quality problems are from areas contaminated in the past. Persistent toxic contaminants such as PCBs and mercury remain in the water and river and lake sediments for long periods of time, if not indefinitely, even after most sources have been eliminated. These contaminants may be located in hot spots of former industrial activities. The 14 Great Lakes Areas of Concern in Michigan are priority sites identified for cleanup because of historic pollution discharges.

The Great Lakes still support important recreational and commercial fisheries. Recreational fishing adds about $1.4 billion annually to Michigan's economy. Michigan's commercial fisheries net about 16 million pounds of whitefish, chub, lake trout, catfish, and other species each year, with a dockside value of about $20 million. However, fish advisories recommend Michigan’s citizens especially children and pregnant women, limit their Great Lakes fish consumption because toxics, including PCBs, mercury, dioxins, and other contaminants, accumulate in the flesh of fish.

Great Lakes fisheries also are vulnerable to aquatic nuisance species. Sometimes called exotic species, these aquatic nuisance species are non-native plants and animals that now find a home in the Great Lakes. The sea lamprey has decimated the Great Lakes fisheries since its introduction over 50 years ago. Lamprey control efforts combined with fish stocking from hatcheries helps maintain the current fisheries. About one-quarter of the recreational fisheries' value comes from hatchery-reared fish, including most Great Lakes trout and salmon caught by recreational anglers. The continued unintentional introduction of aquatic nuisance species, such as the zebra mussel and round goby, threatens native plants and animals and the stability of the Great Lakes environment.

Michigan's Great Lakes shoreline contains natural features unique in the world. Large sand dunes stretch along the shores of Lakes Michigan and Superior. Dunes can be as high as 250 feet and a mile wide. Unique natural communities, known as alvars, form on limestone bedrock along Lakes Michigan and Huron. Dunes and alvars provide habitat for rare or endangered plants and animals. Coastal wetlands also provide habitat for diverse plants and animals as well as in many cases protecting the shoreline from erosion and filtering pollutants from water. Balancing recreational, environmental, commercial, and development pressures along the valuable Great Lakes shorelines has always been a challenge.

The Great Lakes are a vast resource, but they are not inexhaustible or impervious to harm. Our use of the Lakes affects both the quantity and quality of the Lakes’ water, the fish and wildlife in the Lakes, and the shoreline surrounding the Lakes. In turn, our future use of the Lakes may depend on how we manage this unique resource today and in the future.

Great Lakes Regulatory and Agreement Structure

The multi-jurisdictional nature of the Great Lakes basin is demonstrated through the various statutes and treaties found at the state, provincial, and national level. The evolution of these regulatory programs has in large part resulted from the increasing amount of importance that has been placed on protecting the Great Lakes. Beginning with early treaties to establish fishing rights and creation of the International Joint Commission, policymakers have worked to fashion more detailed laws and policies to address specific issues in the basin.

In order to appreciate this regulatory network, the Task Force asked the Michigan Office of the Great Lakes to provide an overview of the principal laws, agreements, and treaties that attempt to control activities in the Great Lakes.

State Natural Resources and Environmental Protection Act 451

Water Resources Protection

The water resources protection section of Public Act 451 provides regulation for the control of point source and nonpoint source water pollution to waters of the state. These include municipal and industrial discharges, storm water discharges, and combined and sanitary sewer overflows. Point source discharges to water are strictly controlled by permits under the National Pollution Discharge Elimination System (NPDES). Implemented by the Michigan Department of Environmental Quality (DEQ), Surface Water Quality Division. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-II-1-WATER-RESOURCES)

Air Resources Protection

The air pollution protection section of Public Act 451 provides regulation of air discharges from fixed and mobile sources. Controls are achieved through permits required for fixed sources and testing of certain mobile sources. Implemented by the Michigan DEQ, Air Quality Division. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-II-1-AIR-RESOURCES-PROTECTION)

Wetland Protection

Permits to protect wetlands are issued under authority of the wetland regulation section of Public Act 451. Protected wetlands include wetlands over five acres; any wetland contiguous to the Great Lakes, inland Lakes, or rivers; and any wetland less than five acres but determined by the DEQ to be essential to preserving Michigan's natural recourses. These permits are generally required for all drain and fill projects in protected wetlands. Implemented by the Michigan DEQ, Land and Water Management Division. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-III-1-INLAND-WATERS-303)

Critical Dunes

Critical dune regulation permits are issued to protect coastal dune areas designated by the state under Public Act 451. Permits control construction and development activities in the dunes to achieve this protection. Implemented by the Michigan DEQ, Land and Water Management Division. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-III-1-LAND-HABITATS-353)

Ballast Water

The ballast water section of Public Act 451 requires ocean-going and nonocean-going ships on the Great Lakes to report on use of best management practices for control of aquatic nuisance species in ship ballast water. It also requires the DEQ to post lists of ships that use practices proposed by shipping associations and to test ballast water treatment methods. Implemented by the Michigan DEQ. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-II-1-WATER-RESOURCES-31)

Soil Erosion and Sedimentation Control

This section of Public Act 451 requires soil erosion control permits for construction activities within 500 feet of water, including the Great Lakes. Implemented by local units of government. (http://www.michiganlegislature.org/law/getObject.asp?objName=451-1994-II-2-SOIL-CONSERVATION-EROSION-AND-SEDIMENTATION-CONTROL)

Great Lakes Submerged Lands

Permits for construction, dredging, and filling activities in Great Lakes and connecting channel waters are authorized under this section of Public Act 451. Implemented by the Michigan DEQ, Land and Water Management Division. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-III-1-THE-GREAT-LAKES-325)

Shorelands Protection and Management

Construction activities in environmental areas and high risk areas along the shores of the Great Lakes are regulated with this section of Public Act 451. Implemented by the Michigan DEQ, Land and Water Management Division. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-III-1-THE-GREAT-LAKES-323)

Environmental Remediation

The Environmental Remediation section of Public Act 451 provides authority for remediation, cost recovery, and clean-up standards for contaminated sites in Michigan. Implemented by the Michigan DEQ, Environmental Response Division. (http://www.michiganlegislature.org/law/getObject.asp?objName=451-1994-II-7)

Great Lakes Preservation

This section of Public Act 451 requires water use reporting within the Great Lakes basin. Implemented by the Michigan DEQ, Drinking Water and Radiological Protection Division. (http://www.deq.state.mi.us/ogl/statutes/part327.html)

Endangered Species

This is the state authority for protection and management of endangered and threatened species in Michigan. Implemented by the Michigan Department of Natural Resources, Wildlife Division. (http://www.michiganlegislature.org/law/GetObject.asp?objName=451-1994-III-1-ENDANGERED-SPECIES)

Federal Environmental and Natural Resource Protection Laws

Clean Water Act

The Clean Water Act sets the basic structure for regulating discharges of pollutants to waters of the United States. The Act makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit (NPDES) is obtained under the Act. The Act provides for delegation by the Environmental Protection Agency (EPA) of many permitting, administrative, and enforcement aspects of the law to state governments. The Act also provides for regulation of wetlands. Implemented by the U.S. EPA (water pollution) and U.S. Army Corps of Engineers (wetlands). (http://www.epa.gov/region5/defs/html/cwa.htm) (http://www.usace.army.mil/public.html#Regulatory)

Clean Air Act

The Clean Air Act is the comprehensive federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes the EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. Implemented by the EPA. (http://www.epa.gov/region5/defs/html/caa.htm)

Safe Drinking Water Act

The Safe Drinking Water Act was established to protect the quality of drinking water in the United States. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorized the EPA to establish safe standards of purity and required all owners or operators of public water systems to comply with primary (health-related) standards. State governments, which assume this power from the EPA, also encourage attainment of secondary standards (nuisance-related). Implemented by the EPA. (http://www.epa.gov/region5/defs/html/sdwa.htm)

Water Resources Development Act

The Water Resources Development Act authorizes federal navigation, flood control, and water level control projects, including those in the Great Lakes. Also included are authorities for disposal of dredge spoils, remediation of contaminated sediments,

shoreland protection for navigable waters, and Governors' approval of Great Lakes diversions. Implemented by the U.S. Army Corps of Engineers. (http://www.hq.usace.army.mil/cepa/pubs/cf99wrda.htm) (http://www.deq.state.mi.us/ogl/water_resources_development_act_.html)

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

CERCLA provides a federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through the Act, the EPA was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup. Natural resource damage assessments for contaminated sites are carried out under the Act. Implemented by the EPA. (http://www.epa.gov/region5/defs/html/cercla.htm)

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act gives the EPA authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. The Act also sets forth a framework for the management of non-hazardous wastes. Implemented by the EPA. (http://www.epa.gov/region5/defs/html/rcra.htm)

Toxic Substances Control Act

The Toxic Substances Control Act gives the EPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. The EPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. The EPA can ban the manufacture and import of those chemicals that pose an unreasonable risk, such as PCBs. Implemented by the EPA. (http://www.epa.gov/region5/defs/html/tsca.htm)

Coastal Zone Management Act

The Act provides assistance to coastal states to protect and manage coastal resources, including authorization of state Coastal Zone Management Plans and funding for a grants program. Implemented by the National Oceanographic and Atmospheric Administration. (http://www.ocrm.nos.noaa.gov/czm/czm_act.html)

Endangered Species Act

The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The U.S. Fish and Wildlife Service of the Department of the Interior maintains the federal list of 632 endangered species and 190 threatened species. Implemented by the U.S. Fish and Wildlife Service. (http://www.epa.gov/region5/defs/html/esa.htm)

National Invasive Species Act

This Act provides authority for the control of unintentional introductions of aquatic nuisance species into waters of the United States, including the Great Lakes. The Coast Guard uses this authority to require certain ballast water management practices to control discharge of aquatic nuisance species for ships coming into the Great Lakes from the St. Lawrence Seaway. State management plans for aquatic nuisance species are also authorized under this act. Implemented by the U.S. Fish and Wildlife Service. (http://anstaskforce.gov/nanpca.htm)

Pollution Prevention Act

The Pollution Prevention Act focused industry, government, and public attention on reducing the amount of pollution through cost-effective changes in production, operation, and raw materials use. Implemented by the EPA. (http://www.epa.gov/region5/defs/html/ppa.htm)

Oil Pollution Act

The Oil Pollution Act provides the EPA's authority to prevent and respond to catastrophic oil spills. The Act requires oil storage facilities and vessels to submit to the EPA plans detailing how they will respond to large discharges. The Act also requires the development of Area Contingency Plans to prepare and plan for oil spill response on a regional scale. Implemented by the EPA. (http://www.epa.gov/region5/defs/html/opa.htm)

Insecticide, Fungicide, Rodenticide Act (FIFRA)

The primary focus of the Act is to provide federal control of pesticide distribution, sale, and use. The EPA is given authority under FIFRA not only to study the consequences of pesticide usage but also to require users (farmers, utility companies, and others) to register when purchasing pesticides. Users also must take

exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by the EPA. Implemented by the EPA. (http://www.epa.gov/region5/defs/html/fifra.htm)

International Treaties and Agreements

Boundary Waters Treaty of 1909

This treaty between the United States and Canada establishes the International Joint Commission and authorizes boundaries water level controls, including the Great Lakes. Implemented by the International Joint Commission. (http://www.ijc.org/ijcweb-e.html)

Great Lakes Water Quality Agreement as Amended 1987

This agreement between the United States and Canada establishes Remedial Action Plans for Great Lakes Areas of Concern and Lakewide Management Plans for the Great Lakes, and sets specific objectives for critical pollutants. Implemented by the EPA and Environment Canada. (http://www.ijc.org/ijcweb-e.html)

Great Lakes Air Quality Agreement

This Agreement between the United States and Canada provides a mechanism to address shared concerns for trans-boundary air pollution. Implemented by the EPA and Environment Canada. (http://www.ijc.org/agree/air.html)

Binational Toxics Strategy

The Strategy coordinates actions to eliminate persistent, bio-accumulative toxic substances from the Great Lakes basin. Implemented by the EPA and Environment Canada. (http://www.epa.gov/glnpo/bns/)

Strategic Great Lakes Fisheries Management Plan

The Plan is a cooperative agreement among state, provincial, tribal, and federal governments on Great Lakes fisheries management, including procedures for establishing fish community objectives for each Lake. Implemented by individual fisheries management jurisidictions. (http://www.glfc.org/fishmgmt/sglfmp97.htm)

The Convention on Great Lakes Fisheries

The Convention establishes the Great Lakes Fisheries Commission to research and manage Great Lakes fisheries, especially related to the control of sea lamprey. Implemented by the Great Lakes Fisheries Commmission. (http://www.glfc.org/pubs/conv.htm)

1836 Treaty

The 1836 Treaty establishes native American fishing rights and tribal management of certain Great Lakes fisheries. Implemented by the Chippewa-Ottawa Treaty Management Authority. (http://www.cotfma.org/cotfma.html#treaty)

Regional Agreements

Great Lakes Charter

The Charter is a regional water management agreement signed by the governors and premiers of the Great Lakes states and provinces. It controls diversions and consumptive use of water within the Great Lakes basin. Implemented by the Council of Great Lakes Governors. (http://www.cglg.org/pub/charter/index.html)

The Great Lakes Charter Annex 2001

The Annex is an agreement among the Great Lakes governors and premiers to update and reinforce the commitments of the Great Lakes Charter. Implemented by the Council of Great Lakes Governors. (http://www.cglg.org/projects/water/Annex2001.pdf)

Great Lakes Basin Compact

The Compact establishes the Great Lakes Commission for state and provincial cooperation and advocacy on Great Lakes issues. Implemented by the Great Lakes Commission. (http://www.glc.org/about/glbp.html)

Great Lakes Toxic Substances Control Agreement

The Great Lakes Toxic Substances Control Agreement establishes coordinated regional action to control toxic pollutants to the Great Lakes. Implemented by the Council of Great Lakes Governors. (http://www.cglg.org/pub/toxics/)

Aquifer Protection, Diversion and Water Withdrawal

Principal Issue

As the demand for water increases around Michigan and around the world, new challenges to the Great Lakes must be met by the development of a comprehensive law promoting the conservation of water resources.

Background

The issue of water withdrawal and diversion has attracted an increasing amount of attention in the past few years. The Task Force heard testimony from groups and individuals who were concerned both with immediate problems caused by water withdrawals and also with the long-term consequences of water diversions.

Michigan has no statute that regulates the quantitative withdrawal of water from aquifers. This has led to problems in selected areas around the state as intensive withdrawals have reduced the level of groundwater, usually on a seasonal basis. The Task Force heard from individuals in both Monroe and Saginaw who have experienced significant interruptions in their water supply due to withdrawals at other locations. The Task Force also learned of a dispute between two Macomb County communities—the city of Richmond and Lenox Township— where competing water uses have depleted the local aquifer, depriving residents of domestic water supplies and sending the two municipalities to the courts. The usual scenario is that households that depend on relatively shallow private wells suffer interruptions when another use of water in the same area depletes the groundwater so that the water level is reduced below the depth of the private wells. In some cases the interruption has lasted for months, leaving these individuals without one of the most basic elements of modern life. The enactment of laws that would allow for the regulation of withdrawals to prevent such problems would be of immediate benefit to those who have found themselves without water and would provide protection in the future against this problem being inflicted on others.

The Task Force also heard from groups and individuals who expressed disappointment, and sometimes anger, regarding the recent decision of state agencies to permit groundwater withdrawals by the Perrier company. Many feared that such withdrawals would lead to the significant reduction in groundwater recharging of rivers and streams, with impacts ultimately felt by the Great Lakes themselves. If intensive enough, the local depletion of groundwater would reduce the flow of rivers and streams, causing a ripple effect on delicate ecosystems based in such waterways. It should also be noted that the Great Lakes themselves all receive a significant percentage of their water, in amounts varying from 24 to 32 perent, from groundwater flows. However, because Michigan laws do not contain a statute regulating the quantitative withdrawal of water, the state was left with little alternative beyond ensuring that the water used by Perrier was suitable for human consumption.

According to the testimony received, the impact of unregulated withdrawals of groundwater, both on human society and on Michigan's environment, will become more significant as increasing demands are placed on groundwater sources.

However, the regulation of water withdrawals and diversions has become increasingly complex in the context of an international legal environment. Although Michigan law forbids the diversion of water from the Great Lakes, and the federal Water Resources Development Act ostensibly authorizes any Great Lakes state governor the power to veto diversions, serious concerns have arisen whether such laws would withstand a determined challenge in court. These concerns have their roots in the provisions of the Interstate Commerce Clause of the U.S. Constitution and the provisions of various international trade agreements, which the Supremacy Clause of the U.S. Constitution compels the states to observe. The problem that arises under both of these situations is

that a water control regime that favors domestic uses could be construed as a discriminatory practice that unfairly disadvantages interstate and international commerce. Although both the Interstate Commerce Clause and international trade treaties recognize the need for protection of the public health and the protection of the environment, and that protections that have an incidental impact on interstate and international commerce are permissible, legal experts contend they must be applied in an even-handed manner that does not discriminate between in-basin and out-of-basin water uses.

In response to this emerging legal environment, the state has negotiated Annex 2001, explained Keith Harrison, the acting director of the Michigan Office of the Great Lakes. Annex 2001, an agreement among the American states and Canadian provinces that border the Great Lakes, calls for the creation of a water control regime that emphasizes three key principles: (1) preventing any harm to the Great Lakes resource caused by individual or cumulative withdrawals, (2) promoting the conservation of Great Lakes water and the Great Lakes environment, and (3) requiring that any diversion or withdrawal that is permitted must result, directly or indirectly, in the improvement of the resource. At the same time, the regime must be structured in such a manner as to withstand legal attacks based on either the Interstate Commerce Clause or the provisions of international trade treaties. As envisioned by Annex 2001, the creation of such a regime would involve a complicated series of measures involving all Great Lakes states and provinces and the national governments of the United States and Canada. The scope of action by public bodies in creating the regime would include state statutes, interstate compacts authorized by Congress, federal statutes, and an international treaty.

Testimony

As some of the people who testified before the Task Force recognized, new laws relating to water withdrawals and diversions must fit within the context suggested by Annex 2001. Arlin Wasserman, of the Michigan Land Use Institute, proposed a water protection statute that would balance the demands of water use with the need for good water quality. He suggested that public uses should receive a higher priority than commercial uses and suggested that commercial withdrawals should be permitted only through payment of a fee, which in turn could be directed into a water resource improvement fund, not unlike the existing Natural Resources Trust Fund. James Clift, of the Michigan Environmental Council, also stated that withdrawals based on the profit motive should be discouraged in favor of withdrawals for the public's common benefit. Mark Richardson, an assistant prosecuting attorney for Macomb County who works with environmental issues in that office, suggested in written testimony that a water withdrawal statute must consider both direct withdrawals from bodies of water and also withdrawals of groundwater.

Findings

There is an immediate need for an aquifer protection statute to protect the public and the environment from both present and future problems caused by water withdrawals. Several other states in the Great Lakes region have implemented such laws. Such a law must include the mapping of aquifers, as well as thresholds of use for registration and regulation purposes. The law must give the state the ability to refuse permits for water withdrawals so intense that they threaten the public interest or the environment. Where significant withdrawals are permitted, they must be required to adhere to the three key principals of Annex 2001: preventing harm to the Great Lakes resource, conserving this vital resource, and, ultimately, enhancing it. Of course, any new law regulating withdrawals or diversions must be able to withstand legal challenge; therefore, it must be even-handed in the promotion of conservation both within and outside of the Great Lakes basin.

In addition, there is a need for a much deeper understanding of the Great Lakes and their ecosystems. Any water use statute will benefit from a fuller understanding, and it is likely that any law enacted in the near future will need to be fine tuned as more is known about the dynamics of the Lakes and their watershed as a whole.

Recommendations

1. *The Legislature should enact comprehensive water withdrawal laws. This process may require a step-by-step approach, beginning with the enactment of an aquifer protection statute.*

2. *The Legislature should also promptly enact any implementation laws arising from the consummation of the Annex 2001 process.*

Municipal Sewage Control

Principal Issue

Sewage overflows and other forms of point source pollution flowing into the Great Lakes and other waters of the state are chief sources of water quality problems. The people of Michigan are directly affected by this type of pollution through frequent beach closings, impurities in drinking water, and sewer backups into homes. In its attempt to further control water pollution, there is a general perception that the state lacks an adequate system for monitoring water quality and could do more to fund local efforts to control pollution and to enforce existing water pollution laws.

Background

Municipal sewage control is a historic problem in Michigan. In 1913, an article from the *Grand Rapids Press* indicated that the city of Grand Rapids was sued by Grandville and Wyoming Townships, alleging that raw sewage from Grand Rapids fouled the area and contaminated wells. The Circuit Court threw out the lawsuit, but an appeal to the Supreme Court resulted in an injunction compelling the city to "deodorize and purify its sewage."

Fast forward more than 80 years later and note that Grand Rapids is still challenged by the issue of proper sewer management. Again from the archives of the *Grand Rapids Press*: "Grand Rapids celebrates completion of the first phase of sewer overflow project." After significant overflows in the previous eight years, city officials commented that the work, effort, and investment of over $160 million in additional system changes have paid good dividends.

Department of Environmental Quality (DEQ) water quality analyst Teresa Seidel commented that "they've done so much work so quickly. There's no other CSO community in the state that has eliminated 96 percent of their overflows."

Sewer overflows are typically divided into two categories — combined sewer overflows (CSO) and sanitary sewer overflows (SSO). In the past, regulators considered SSOs to be a minor problem compared to CSOs. However, as more CSOs have been addressed, continuing problems with sewage-polluted waters has directed attention to SSOs.

According to information compiled by the DEQ, 48.2 billion gallons of raw or partially treated sewage from CSO events have been discharged into Michigan waters for the year 2000 alone. For SSO events, 129.5 million gallons of raw sewage was discharged into Michigan waterways. Thus, the total number of gallons of raw or partially treated sewage dumped into Michigan waters during the year 2000 was 48.33 billion gallons.

Aging and outdated sewer infrastructure; lack of necessary funding support for improvements; illicit undiscovered sewer connections and unattended septic tanks in more rural areas of the state face Michigan communities throughout the state. Perhaps no other environmental issue facing the state has been so confounding, expensive, and time consuming.

In a report prepared for Clean Water Michigan entitled "Managing the Cost of Clean Water," Public Sector Consultants captured the enormous scope of the problem:

"The burden for capital improvements to sanitary sewer infrastructure has fallen disproportionately on older urban areas in the state, which can least afford them. In many of these, the population and tax base are shrinking, and average household income is below the state average. For the residents who remain, the cost of pollution control is becoming unaffordable. In some communities, the costs of sanitary sewer service or special assessments for wastewater capital improvements are already so significant that residents are moving to the suburbs, where such costs are, at least for now, lower. Urban sprawl increases the need for sanitary sewer infrastructure and ultimately raises the cost per household for maintenance of systems that serve less

dense populations in the suburbs. Many communities are also facing new costs associated with the new storm water regulations."

The principal need of communities facing sewer management problems has been funding. Funding typically comes from either local bond sales or through negotiation of a low-interest loan from the State Revolving Fund (SRF), annually capitalized with appropriations from the federal and state budgets.

Estimates by various state officials indicate that the state faces a significant financial burden if the problem of sewer overflows is to be corrected. The DEQ estimates indicate that roughly $8 billion would be needed based on an annual expenditure of $400 million from the SRF over a 20-year period of time.

Federal funding for the SRF has been inconsistent, with Michigan receiving about $54 million a year. Federal law provides for a ratio of five federal dollars to every one state dollar. There is no requirement for the federal government to meet the amount that the state puts up for funding. The only requirement is for the state to put up its share to match what the federal government provides.

Municipalities also face significant liability problems when dealing with sewer overflows. Exposure to a strict liability standard for various costs associated with sewer backups has meant that dollars normally available for sewer system upgrades are expended in settlements and court awards.

Legislation has been introduced in both the House and the Senate in an attempt to provide locals with additional funding, water quality data gathering services, liability protection, and inspection guidelines to address sewer management problems.

Testimony

The Task Force received significant testimony on the issue of sewage control at each of its hearings. Both written and oral testimony was presented by individuals, associations, groups, and municipal officials that clearly instructed the Task Force that much needs to be done to address how the state can assist locals in sewage control. In its report submitted to the Task Force at the Port Huron hearing, the "Blue Water Task Force on Water Quality" sent a strong message to policymakers in Lansing:

"Untreated sewage has no place in the waterways of our county. Government must ensure that sewage is properly treated and controlled. The most obvious areas where untreated sewage is currently entering our surface waters are sanitary sewer overflows, illicit connections, and failing septic systems. All of these conditions are illegal."

While in Monroe, the Task Force heard of the common frustration of sewage overflows in the form of testimony from Kathleen Law, Councilwoman from Gibraltar Township: "I believe that sewage contamination is a major issue for the health of our Great Lakes, and I know that having just one day of compliance at the Detroit wastewater treatment plant would be an achievement."

In Roseville and again in Port Huron, Macomb County Prosecutor Carl Marlinga testified that he "thought that only Third World nations dumped raw sewage into the waters!" Many others also added sewage overflows to their litany of issues confronting the health of the Great Lakes. In fact, of all issues presented to the Task Force, sewage overflows in the forms of SSOs, CSOs, and septic systems ranked in the top one-third of frequency of all issues mentioned.

"I believe that sewage contamination is a major issue for the health of our Great Lakes, and I know that having just one day of compliance at the Detroit wastewater treatment plant would be an achievement."

One of the themes on this issue that the Task Force heard time and again was that locals are often willing to face their problems on their own but do need some help with funding. Many have chosen to be as proactive as possible and try to respond quickly to infrastructure problems, but the huge costs incurred in upgrading their sewer systems call for state assistance. Echoing this call for more state assistance, Robert Clegg, Port Huron City Engineer, explained that his city has in place a 15-year program in which they have reduced the amount of the overflows after only five years of work by almost 50 percent. In his words, "the citizens of Port Huron have put up with much, including holes in their neighborhoods and higher sewer bills, but that there

needs to be continued support for local communities from the state."

Appearing before the Task Force because she "felt it was her responsibility as a citizen to protect the Lakes," Pamela Wall, from Algonac, told the Task Force about her background in local government, that she had worked on the sewage treatment problem, and that the state needs to make funding of the State Revolving Fund a priority, because "it is not nearly large enough to handle all the communities and their problems." Macomb County Prosecutor Carl Marlinga echoed this recommendation by stating that "the SRF is a good way of providing money to locals," but the need for money is still there.

Many people sensed that urban growth has and will continue to have a staggering impact on the problem of sewage management. Arlin Wasserman, of the Michigan Land Use Institute, and Christopher Wright, from the Watershed Center of Grand Traverse Bay, both agreed that huge increases in population for the Grand Traverse area has and will have an impact on natural resources in the area. Mr. Wasserman noted recent problems with overflows in Northport and that the state not only needs to supply more dollars but also could provide technical assistance and smart growth plans to help in minimizing the pressures to continually upgrade systems. Mr. Wright believes that more needs to be done to educate the people in the Grand Traverse area about the impact they have on water resources. In this, he believes that they can more accurately assess the worth of the resource base and, consequently, adjust their behaviors.

"You need to look at a lot more of the land, not just in a defined sewer district, because many discharges from septic systems have an impact on the area as well."

George Holzworth, from the Earth Technology Company in Cheboygan, testified that there used to be a lot of money available in the 1970s but that given all the expansion, even that level of funding would not be enough. Chuck Hershey, representing the Southeast Michigan Council of Governments and appearing before the Task Force in Roseville, also talked about the problem of urban expansion and indicated that this will have a huge impact on an already overburdened system in Southeast Michigan. He noted that though there have been some improvements made, there are still persistent problems, particularly with failing septic systems.

This need for more attention to on-site sewage disposal systems (OSDS) was an issue that the Task Force was prepared to hear about based on recent reports of problems throughout the Southeast Michigan area, including the Lake St. Clair watershed. During the debate on how to use Clean Michigan Initiative funds, the Legislature heard from many observers that illicit sewer connections and failing septic systems are at the root of the water quality problems facing Lake St. Clair. More recent discussion on this issue in the form of talks held on Senate Bill 107 (which would provide standards for inspections of OSDS) confirmed that poorly maintained septic tanks throughout the state are a problem that has been largely ignored by the state.

Don Dunn relayed his personal frustrations with a problem of a failing septic system in his township located in Sanilac County. Others, such as Tom Divis from Berrien, talked about sewage systems located near inland lakes and wanted the Task Force to look at these systems to see how they impact water quality in the Great Lakes. Bruce Barker, of Grand Rapids, and Adelle Pleatman talked about the benefits of coordinating a water quality plan along a regional or watershed approach and that according to Barker, "you need to look at a lot more of the land, not just in a defined sewer district, because many discharges from septic systems have an impact on the area as well."

Some local units of government take the time to establish and implement inspection systems at the point of sale of property, and when they do, they are more able to catch problems before they have a major impact as described in Thomas Kalkofen's overview of the Macomb County ordinance. But many communities have not taken this step, and according to people like Christopher Boday, from the Grand Traverse Department of Public Works, the state needs to get more involved in revising controls on OSDS to "give the counties more consistent controls to coordinate a septic program." Yet, in

establishing those controls, the state faces some significant policy battles in requiring locals to conduct inspections due to the constitutional restrictions of the Headlee Amendment, and they have been cautioned to not preempt local regulations that are currently in effect.

A final key component of the sewage management issue was the general need for a more rigorous enforcement of water quality laws from the DEQ. Frank Green is a citizen who lives at the edge of Lake Erie near the River Raisin, and he gave the Task Force a stirring account of the problems that he has in allowing his grandchildren to "even touch the waters of the Lake." He senses that this is a problem all over the state and that more needs to be done to enforce the laws of the state. He suggested that the state establish a program that would take fines paid by the polluters of the waters and keep the money locally by requiring that the DEQ work with the municipality to clean up the problem.

Carl Freeman, from Wayne State University, urged the Task Force to remember that citizens pay tax dollars for services to be rendered, that these services include the proper enforcement of our laws, and that the DEQ is not doing this job adequately. He stated flatly that instead of being able to rely upon the DEQ, "we need watchers to watch the watchers."

Representive Mickey Switalski talked about the need for the DEQ to get more timely information out on sewer overflows and believed that passage of legislation (House Bill 4095) that requires more public notice on overflows would put added pressure to "bear upon those who are polluting."

Findings

There is a general consensus that sewage overflows is one of the most serious problems facing the health of our Lakes today. More funding and technical assistance should be made available to local units of government as they seek to manage their sewage problems. The problems being faced at this time are exacerbated by continual growth and expansion, and even liberal estimates to fix the state's sewage management problem of $20 billion to $50 billion often do not fully address all anticipated growth. The state could do much to help in this regard by making funding of the SRF a priority, coordinating a statewide inspection program for OSDS, and ensuring that state enforcement agencies have a system in place that allows for identification and then aggressive enforcement against polluters.

Recommendations

1. *Make funding of the SRF a key priority through consideration of either an issuance of General Obligation Bonds or through a dedicated revenue source.*

2. *Legislation should be considered that in order to access the SRF, applicants must be able to show that a growth management plan is in place that demonstrates the capacity of the current sewer infrastructure to accommodate projected growth.*

3. *Require the DEQ to make it a chief priority of its Strategic Water Quality Monitoring Program to work with local water quality monitoring efforts to identify all significant illicit sewer connections and other point sources of sewage discharge.*

4. *Implement a statewide OSDS inspection program to be conducted by local officials. There may be Headlee implications in mandating such a program, but a local inspection program could be motivated by allowing the DEQ to issue grants to fund program development.*

5. *Provide additional incentives for municipalities within a particular watershed or region to coordinate sewage management plans.*

Directional Drilling Beneath the Michigan Waters of the Great Lakes

Principal Issue

There is a general perception among the public that the presence of oil and gas near the Great Lakes poses significant risks to the health of the basin. Yet, there is also the perception that the production and transport of oil and gas are essential activities and may be carried on safely with proper regulation and oversight.

Background

Directional drilling is the intentional drilling of a non-vertical well. It is a technique used when the wellhead cannot be located directly above the spot where the well should penetrate a petroleum reservoir. Out of more than 47,300 commercially drilled wells in Michigan, there have been 13 directionally drilled wells below the Great Lakes, with this activity beginning in 1979. Of those 13 wells, 6 continue to produce natural gas and one continues to produce oil. There have been no reports of any of those wells leaking oil or gas into the waters of the Great Lakes. Because the state receives royalties for the Natural Resources Trust Fund through the leasing of state-owned mineral rights, directional drilling has produced additional revenues used for land conservation projects.

Both the Department of Environmental Quality (DEQ) and the Department of Natural Resources (DNR) are involved in the regulation of directional drilling. Before a person can drill an oil or gas well anywhere in Michigan, he or she must have title to the subsurface oil and gas mineral rights through ownership or lease. The state owns all the bottomlands located within Michigan's boundaries, and the DNR has administrative responsibilities for leasing minerals below the Great Lakes bottomlands. A person must also obtain a drilling permit from the DEQ's Geological Survey Division before he or she can drill an oil or gas well. In addition, the State Administrative Board must approve all DNR-negotiated leases.

There has been substantial criticism over this bifurcated process which allows for a state lease to be issued prior to a full environmental impact assessment being conducted. Some have speculated that the state may be exposed to a potential "takings" claim should the right to drill be withheld from the lessee. In addition to this potential problem, there is also some concern over the varied lengths of time that have existed between the DNR's issuance of a lease of bottomlands and the Geological Survey Division's issuance of a drilling permit. A review of 8 of the 13 directionally drilled wells indicates that permits to drill were issued between two months prior to the lease being issued to ten months after the lease was issued. This uncertainty in the leasing/permit issuance process casts added doubt on the integrity of the whole leasing and permitting practice.

In August of 1997, at the request of the Governor, a panel of four current members of the Michigan Environmental Science Board (MESB) along with two guest scientists was convened to evaluate the current regulations to determine whether directional drilling posed any significant threats to the Great Lakes. The panel met only once and issued its conclusions. The panel concluded that the practice, as regulated, posed "little to no risk of contamination to the Great Lakes bottom or waters through releases directly above the bottom hole portion of the wells . . . . There is, however, a small risk of contamination at the wellhead."

As a part of its findings, the MESB panel recommended that several additional regulatory steps could be taken to further the safeguards on directional drilling. In response to these recommendations, the Supervisor of Wells issued Instruction 2-97, which implemented, among other protections, a 1,500-foot buffer zone from the Great Lakes and the prohibition of a new well or surface facility within statutorily defined environmental areas. It also prevents the use of

mudpits for the disposal of drilling mud.

Recently, on September 14, 2001, the Natural Resources Commission voted to lift a moratorium placed on the issuance of new bottomlands leases and, at DNR Director Cool's order, implemented new leasing procedures designed to address the ecological concerns of the MESB and increase public input in the leasing of state minerals. Much of the substance of the new recommendations for leasing procedures is focused on assuring the public that sensitive natural resources would not be disturbed by wellhead activity. Principal among these new requirements is the mandate that coastal zone inventories must be completed by the DNR prior to initiating the leasing process.

Legislation has been introduced in both the Michigan House and the Senate that ranges from imposing additional regulatory controls on directional drilling in statute to placing a permanent ban on the practice of directional drilling.

On November 14, 2001, President Bush signed into law legislation that would impose a two-year moratorium on both the federal and state government regarding the leasing of minerals or drilling in or around the Great Lakes. House Resolution 2311 would, in part, require the Secretary of the Army to conduct and submit to Congress a report that assesses the known and potential effects of oil and gas drilling in the Great Lakes.

Testimony

Throughout the hearings, there was evident a significant division of opinion over the practice of directional drilling. Public support for banning directional drilling is evident not just through the testimony presented at the hearings but in surveys conducted statewide. Yet, both public and private sector science-based reports would lead one to believe that directional drilling is a relatively safe drilling method that has been in practice since 1979 with no reports of leaks into the Lakes. There is solid evidence that consistently shows that sewage flows into the Lakes, the presence of aquatic nuisance species, and nonpoint source pollution pose far greater threats to the health of the Lakes.

The Task Force heard a significant amount of testimony urging it to recommend a prohibition of directional drilling beneath the Great Lakes to protect the Lakes from “any risks."

At the Task Force hearing in Marquette, Judith Allen wondered why directional drilling was even an issue when the oil resources beneath the Lakes are so limited. Others voiced similar concerns and asked that the Task Force do a cost-benefit analysis weighing the potential impact of any oil and gas reserves against the risks of drilling. Many were of the opinion that any reserves would be limited while others argued that drilling beneath the Lakes would

Karen Bacula’s Eighth Grade Class
Bothwell Middle School

yield substantial long-term benefits both for the state's energy demands and for the further funding of the Natural Resources Trust Fund.

Middle schoolteacher Karen Bacula presented over 100 handwritten letters from students and their parents, many of which urged the state to end the practice of directional drilling beneath the Lakes.

One of these letters, from Nolan Jensen, an eighth grader at Bothwell Middle School, asked the Governor to “not follow through on this until we know exactly how much there is and where it is." Nolan continued in his letter by stating:

“There is always the possibility of a spill. If we say that there can't be one, and then it happens, people aren't going to be quick to do it again. Plus, it's going to take awhile to get it all cleaned up."

Passion continued to guide others' testimony as a number of witnesses at the Roseville hearing repeated a common theme: to “avoid risking the Lakes for an unknown amount of oil or gas." Charlotte Boyd, a resident of Roseville, asked the Task Force to consider what might happen to the Great Lakes if a mistake were made during drilling. “We cannot fix a mistake in our Lakes like we can when we are building roads. Look at what happened with the recent incident involving a bullet hole piercing the pipeline in Alaska!"

Some of these concerns are reinforced with

objective evaluations of the performance of the state in its oversight capacity for certain well activity. In a 1999 Performance Audit of the Geological Survey Division, the State Auditor General concluded that the Geological Survey Division could improve its monitoring of oil and gas wells in the state. Given the potential for new directional drilling activity if leasing and permitting were to continue, additional scrutiny over the DEQ would be one additional step that might be taken by policymakers.

However passionate testimony presented became, certain testimony pointed out that a portion of the public has the wrong "picture" of what directional drilling entails. One letter addressed to the Task Force indicated a misconception that the practice of directional drilling involved the use of off-shore drilling rigs.

In addition, many of those who testified made statements that drilling should not occur in the Lakes. On several occasions, Task Force members cautioned the members of the public that directional drilling does not involve drilling in the Lakes, only beneath the bottomlands of the Lakes.

But there was also important testimony presented that clearly indicated that a segment of the public understood the potential impacts of directional drilling. Paul Janulis, from Rochester Hills, took a strong position against directional drilling and urged the Task Force to consider the financial costs of directional drilling. Mr. Janulis asked the Task Force to consider various scenarios of the directional drilling permitting process and asked them to assess the potential costs of both a "takings" claim against the state and the impact on tourism and other shoreline businesses if a spill were to occur.

The MESB panel suggested there was admittedly a small risk of contamination at the wellhead, and many of those who testified in opposition to directional drilling recognized that the most likely avenue for pollution from these operations would be at the wellhead. Some advocated against directional drilling because of the risks to nearby sensitive natural resources. Tanya Cabala, from the Lake Michigan Federation, supported a ban due to the impact on habitat in the vicinity of a wellhead.

While "facts" were often alleged in support of testimony, they also became a matter of perspective when presented to the Task Force. Observers of the ongoing debate over directional drilling have frequently noted that emotions have dominated discussion. In an attempt to rise above these emotions, factual background papers have been presented by both supporters and opponents of directional drilling. What has occurred in Lansing with both state agencies and interest groups asserting "that they have the facts" also occurred in the Task Force hearings.

In spirited testimony at both the Port Huron and St. Joseph hearings, representatives from the oil and gas industry sparred with members of various grass roots environmental organizations over what they both believed to be the "facts" behind directional drilling. A green data sheet was presented to the Task Force by the oil and gas industry which pointed out that directional drilling has been a safe practice in the state. Filer Township Supervisor Dana Schindler recounted tales of evacuation and hospitalization of some residents in her township caused by sour gas leaks occurring at wellheads in Manistee County.

Tim Cowan, and later Frank Mortl, both from the Michigan Oil and Gas Association, commented that if the facts are carefully evaluated, there is real potential for new oil and gas reserves along with very little real risk to the health of the Lakes. In addition to securing oil and gas for energy consumption, the state's Natural Resources Trust Fund also benefits from royalties paid into the fund from oil and gas producers. Sally Somsell, a biologist and geologist from Traverse City, also supported directional drilling by encouraging the Task Force to "rely upon sound science" and stated that there are presently many more pressing and important problems facing the Great Lakes, such as 160 million gallons of used motor oil and raw sewage being dumped into the Lakes.

James Clift, Policy Director for the Michigan Environmental Council, provided testimony in several locations on the issue of directional drilling, noting in Traverse City that Michigan is a rogue state with its current stance on directional drilling while commenting in Roseville that many of the current safeguards for directional drilling are not contained within statute. He reminded the Task Force that these safeguards do not have the same permanence as state law. Later, at the Saginaw hearing, Tim Eder, from the National Wildlife Federation, echoed Mr. Clift's concerns by specifically pointing out three recommendations of the MESB that have not been incorporated into the new DNR leasing procedures — to only use existing infrastructure, to conduct environmental assessments prior to lease sales, and to

do comprehensive environmental planning and public participation.

Although the Task Force is confronted with a significant policy debate on this issue and must grapple with the task of sifting through statements and emotions to determine the real risks and benefits of the practice, one piece of testimony seems to ring very true for the current political and policy environment in Michigan. It was captured very clearly in eighth grader Nolan Jensen's letter to the Task Force:

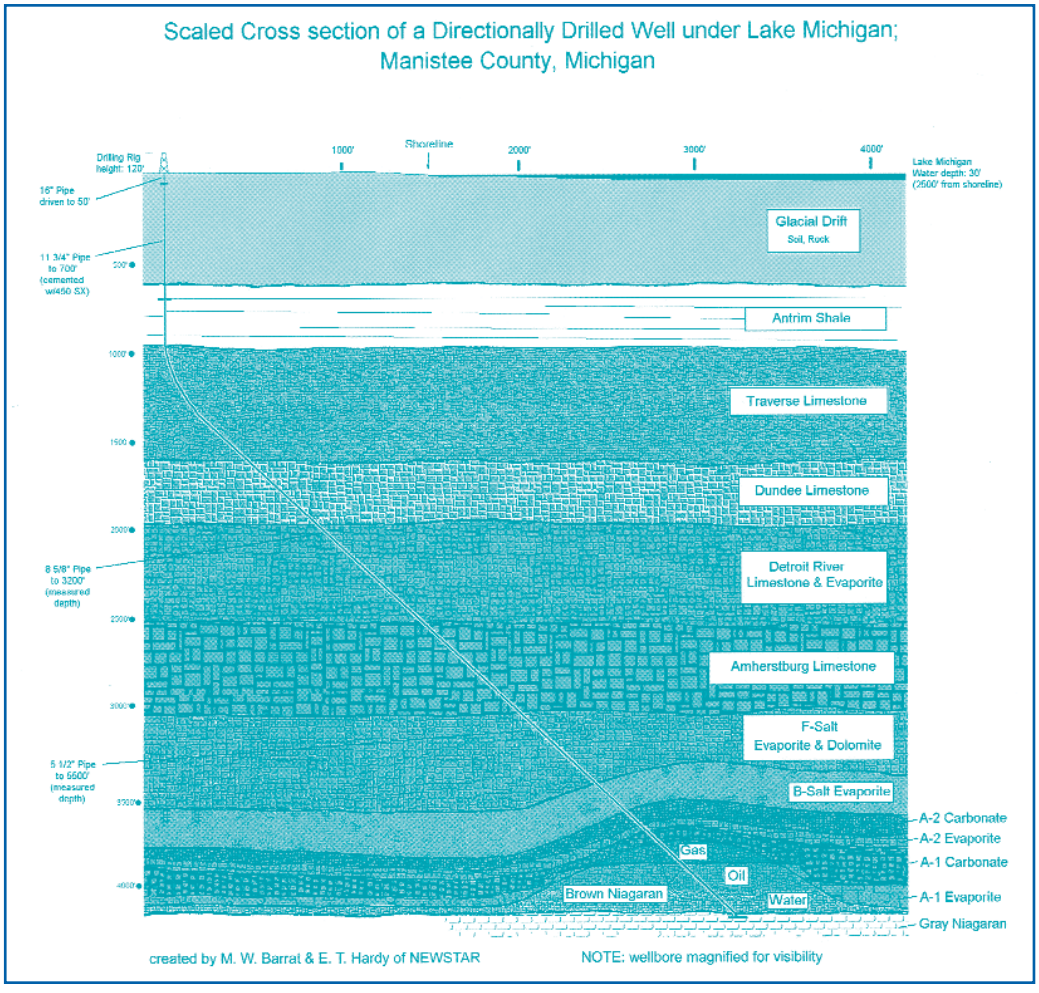
"I think we should back off on this until we know exactly what we are doing. Messing with nature is not a good idea."

Findings

There is significant public opposition to the practice of directional drilling beneath the Great Lakes. Risk of contamination to the waters of the Great Lakes is relatively small, but the impact on shoreline environments and other shoreline uses is greater. All the safeguards recommended by the MESB have not been implemented by the DNR. Few, if any, are actually in statute or rules. The decades-old practice of leasing lands and later conducting environmental impact assessments on well drilling applications potentially subjects the state's taxpayers to serious financial liability.

Recommendations

1. *Implement all MESB recommendations into statute.*
2. *The potential financial liability to the taxpayers presented by the current process of leasing and then deciding on actual drilling permits must be eliminated.*
3. *While some task force members would urge an immediate ban,a moratorium on directional drilling should be imposed to implement recommendations 1 and 2, and to allow an opportunity for further public discussion regarding the wisdom of permitting any further drilling and under what circumstances it could occur.*



Source: www.DEQ.STATE.MI.US/gsd/GreatLakesDrilling/Drill2Scale.pdf

Water Quality Monitoring and Beach Closings

Principal Issue

In its attempt to further control water pollution, there is a general perception that the state lacks an adequate system for monitoring water quality and that the program could do more to support state and local efforts to control pollution.

Background

Water quality monitoring and beach closings are inextricably linked water quality issues. As noted earlier, water quality monitoring has also been discussed within the context of proper sewage management and National Pollution Discharge Elimination Systems (NPDES) permit review. Testimony indicated again and again that as state and local officials have attempted to respond to the repeated number of beach closings throughout the state, a critical problem has been the lack of data that could be used to assess the cause and extent of the contamination. Testimony supported the Task Force's notion that with a more consistent, detailed, and comprehensive program in place, officials would be better able to measure and respond to, and in many cases prevent, beach closings.

State surface water quality monitoring efforts were initiated in the late 1960s and early 1970s with a focus on five major programs: fixed station monitoring, fish contaminant monitoring, biological community surveys, inland lake monitoring, and sediment assessments. Since the 1970s, there has been inconsistent support for water quality monitoring, with budget and staffing cutbacks eroding the programs in the mid-1980s and again in the mid-1990s. In 1995, the Auditor General released a performance report of the Department of Natural Resources' (DNR) Surface Water Quality Division which concluded that "the monitoring program was insufficient to determine if overall water quality has improved, degraded, or remained the same" and indicated that the program did not give the DNR a firm basis for decision making and prioritizing efforts.

In response to this audit, the Legislature directed the Department of Environmental Quality (DEQ) to prepare a report outlining the measures that the department would take to address the shortcomings identified in the audit. In 1997, the DEQ released its report entitled, "A Strategic Environmental Quality Monitoring Program for Michigan Surface Waters." A key ingredient in this report recommended an enhanced monitoring program focused on nine monitoring elements: fish contaminants, water chemistry, sediment chemistry, biological integrity and physical habitat, wildlife contaminants, bathing beach monitoring, inland lake water quality and eutrophication, stream flow, and volunteer monitoring. Cooperation with local units of government and volunteer organizations is a principal component of this plan as the department must rely upon outside sources to arrive at a statewide coordinated plan. Other elements that had been cut back or eliminated in recent years were restored with funding from the Fiscal Year 1997 appropriation to the department. In addition, the DEQ has proposed to use $45 million from the Clean Michigan Initiative's (CMI) $90 million Clean Water Fund for purposes of implementing its water quality monitoring program over a 15-year period.

During recent Senate hearings and other discussions of the DEQ's Strategic Water Quality Monitoring Program, several comments were made concerning shortcomings of the program. Among these comments were:

- Other than information contained in the staff reports, there appears to be no specific mandate for the department to identify the sources and locations of all discharges of sewage from on-site sewage disposal systems (OSDS).
- There appears to be no specific mandate or mechanism established to report these specific findings of all sources back to the locals, although

cooperation with locals is certainly contemplated and such reports would probably naturally occur.

- There is no requirement for the department to report back to the Legislature in a single report that focuses on the site-specific results of the department's identification of the sources and location of the discharges.
- Finally, the DEQ's plan appears to contain no specific requirement for regularly reviewing, updating, and improving its monitoring plan to reflect changes in the environment.

In addition, recent public scrutiny on sanitary sewer overflows (SSO) events in Southeast Michigan have pointed out the inadequate amount of water quality monitoring data that local and state officials have at their disposal to help identify the sources of overflows, with much of the criticism being leveled at the DEQ programs. From testimony received at a hearing of the Senate Natural Resources and Environmental Affairs Committee in Macomb County last year:

"Without any real way of tracking violations, the department has been left to uncover violations through such voluntary programs as the recent 'amnesty program' in which approximately 200 violations were reported to the department. This has been regarded by the Auditor General as a generally ineffective method of identifying unreported discharges. A statewide monitoring program is needed to ensure that funding is done according to a coordinated plan to get at the worst problems facing the state."

Some have observed that it may not be a fair criticism of the department's current water quality monitoring efforts given that the plan lays out a 15-year timetable for implementation and that much of the monitoring infrastructure in place is the result of years of inconsistent support from the budget. The department maintains that there are substantial early successes from the implementation of its 1997 strategy.

On the issue of beach closings, there is little argument that the frequent and highly publicized round of beach closings throughout the state have brought considerable attention to the state's inability to sufficiently improve water quality conditions at its beaches. According to statistics compiled in a survey reported by the Natural Resources Defense Council, 29 Michigan counties responded to an EPA survey with the following numbers tracking beach closings and advisories in the state (it is important to note that these are the number of days beaches were closed or posted an advisory when the advisory/closing was less than six weeks):

Year 2000 - 276 beach day closings/advisories lasting less than six weeks
Year 1999 - 100 beach day closings/advisories lasting less than six weeks
Year 1998 - 226 beach day closings/advisories lasting less than six weeks
Year 1997 - 236 beach day closings/advisories lasting less than six weeks
Year 1996 - 16 beach day closings/advisories lasting less than six weeks

There is no state law that requires beach water quality monitoring. However, state law does authorize local health departments to monitor beaches open to the public.

As part of the DEQ's water quality monitoring program, it has begun to establish a database of its own numbers of beach closings. This information is to be posted on the DEQ's Surface Water Quality Division's web site.

Minimum state water quality standards for bathing beaches are established in administrative rules. Michigan has both a mean and an instananeous standard for indicator organisms. The presence of E.coli bacteria in unacceptable levels is used as the indicator. In addition, state law allows the local health department the authority to seek either a voluntary beach closure or a court injunction for closure.

Although it is not mandatory, many local health departments do conduct beach water quality monitoring programs. As a way of further encouraging local health departments to either continue or begin a beach monitoring program, the DEQ has established a grant program. For Fiscal Year 2001, $100,000 was available for issuing grants.

The St. Clair County Health Department is an example of one local health department that has chosen to take water samples, perform analyses, and issue warnings and closings should those tests reveal water conditions exceeding the state standards. As described in the "Blue Water Task Force Report on Water Quality," the initial program designed to focus on 17 public beaches in St. Clair County was expanded two years ago to include other selected surface water locations. Some are monitored on a weekly basis, with others on a monthly basis. According to the report:

"During the summer months, this surveillance system has provided the information to prevent thousands of individuals from being exposed to water

potentially contaminated by disease-causing bacteria. The payoff of this program — disease prevention — is an example of public health activity at its best."

Various states, such as Illinois, Ohio, Florida, and California, have more aggressive state beach monitoring programs. In Illinois, for example, state law requires that all public beaches must be monitored by collecting two water samples every two weeks from May to September.

Funding and technical assistance for state programs is available from the EPA in the form of the Beach Environmental Assessment Closure and Health Program. This program sets standards and provides grant funding for states that adopt certain E.coli standards. In the most recent round of federal grants, Michigan elected not to apply for a grant due to the fact that only $50,000 was available to Michigan and the grant program was designed to assist with program development. The DEQ is assessing the nature and amount of grant funds available for the next funding cycle to determine whether the state should apply.

Testimony

Many who testified before the Task Force were incredulous that more water quality monitoring has not been conducted in this state. There is the general perception that as the state and local units of government, along with the private sector, become more engaged in cleanups and even preventative activities, adequate jobs cannot be completed without good, accurate baseline data. Some seem to have recognized that the cyclical funding of water quality monitoring in Michigan may contribute substantially to this lack of information. But many more are focused on the urgency to get a monitoring system in place as soon as possible.

Bill Smith is a resident of Mt. Clemens and Chairman of the Clinton River Area of Concern. In the Roseville hearing he talked about the large number of Areas of Concern in Michigan and how the local needs for water data are so detailed that “we need to have the kind of daily information that such a monitoring program would provide." This problem of lack of data was further exemplified during Macomb County Prosecutor Carl Marlinga's testimony when describing his investigation of the Twelve Towns sewer incidents. When trying to apportion responsibility for the overflows, there was no reliable information that could be used to determine who was doing what. “Testing must be done. Where is my government and where are the services it is supposed to provide?"

In Monroe, Dan Stefanski's testimony on the removal of PCBs in the lower portion of the River Raisin Area of Concern caused the Task Force members to question him about whether he had good data to assess the progress made in the cleanup. In response, Mr. Stefanski replied that he did not have that kind of information but that he had attempted to obtain funds from the CMI program without any success. Donald Arnold, a retired Monroe County Commissioner, gave testimony that more water quality monitoring would help the state in assessing and regulating the impact of large dairy farming operations in the state. Both agreed that the kind of information that was needed at the local level was available throughout the state. It would be helpful in ending swimming bans, assessing effects on groundwater wells, and improving access to the public's use of resources like the state parks.

Citizens such as Doris Kintzer from Warren pointed out the notion that even simple water quality analysis is often not available as a public service. When Kintzer noticed a strange black ring in her toilet bowl, she had no idea, and neither did the Warren Water Department, as to what had caused it. Some local officials had suggested that it might be a mold spore, but when she questioned them further, they had no idea as to what it might be.

Without consistent state support for water quality monitoring, many locals have turned to their own devices to implement programs. Many volunteer groups have arisen out of the need to do more water testing in local rivers, streams, and lakes. Mark Shea is a high school teacher from L'Anse Creuse High School, and he told the Task Force about a water testing program that his students have conducted on the Clinton River. “My students do chemical testing on the river and we have used that in our work with the DEQ and the local health department in assessing water quality." Other groups have also found success in establishing their own programs, but there is a general perception that at some point the state needs to provide additional assistance in helping coordinate a statewide program.

Beach closings are a highly emotional issue for the people of Michigan. Many of those who appeared

before the Task Force gave stirring accounts of the impact that shutting down bathing beaches and swimming areas has had on their lifestyles. In Monroe, Andrew Van Slambrouck talked about the fact that he cannot even allow his dog to go into the water because of the E.coli levels. Dan Stefanski described the swimming ban that was intact "every week of the summer on the River Raisin."

Curt Goodman testified that maintaining the city of Marquette's clean beaches and public water supply is a chief goal of the city's wastewater treatment program. Many recognized that declines in the health of the waters to the extent that public swimming beaches need to be closed should be "a wake-up call" to policymakers that something is wrong with the system.

Findings

There is a general consensus that there is an immediate need for more state funding and state technical support for a consistent, coordinated, and comprehensive water quality monitoring program. These efforts should further support the emerging successes found in local water quality testing programs. Although recent changes in the DEQ's water quality monitoring strategy have and should produce more successes, the state needs to, at the very least, continue to consistently support the scope of this program and to regularly assess the state's most critical needs in order to revise the strategy. Beyond that, there is the general thought that more detailed information than is contemplated in that program might be needed to further assist in some local water quality programs.

The repeated number of beach closings is a dramatic signal that more information needs to be available to help clean up the waters of the state and prevent further shutdown of the public's access to those waters. Focusing on the monitoring needs of local swimming beaches should be a priority for the state.

Recommendations

1. *The DEQ's Strategic Water Quality Monitoring Program needs to contain a mechanism for regular updating based on current or emerging needs. Updating of this strategy should be done on a regular basis, such as every three years. This program is based largely on findings from the Auditor General in its 1995 report to the Legislature on the Surface Water Quality Division for the period October 1, 1992, through June 30, 1994. Local water quality "partners" must be invested in the regular update of this strategy to ensure that local data needs are being met.*
2. *A consistent, stable, long-term funding source is needed to prevent the haphazard nature of the state's water quality monitoring efforts. The Legislature needs to continue to support this program with a dedicated funding source. Bonding should not be considered as a funding option. There has been cyclical funding of water quality monitoring in the past, and it has had a serious impact on the program's ability to produce necessary data.*
3. *The Water Quality Monitoring Program must be linked directly to the NPDES permitting program in order to provide that program with a reliable and consistent data source. Designing and updating of the Water Quality Monitoring Program must take this need into account.*
4. *The DEQ cannot conduct a statewide comprehensive Water Quality Monitoring Program on its own. The department must continue to support, both with technical expertise and funding, local water quality monitoring programs. These local programs should be coordinated on a regional watershed basis.*
5. *The Legislature should consider enacting a "statewide beach users protection" statute. Such legislation should include a program for monitoring water quality at state-owned beaches, and should provide a coordinated and consistent system for taking water samples at other beaches and then issuing beach advisories and closings as needed. Local public health officials need to be able to work closely with state officials for information gathering and analysis when needed. Monitoring information should be used to identify violators and remedy the contamination through prosecution, permit revocation, or other means. Such a beach users protection statute would protect the public while helping to discourage violations through vigilant monitoring, hopefully leading to fewer discharges and fewer closings.*
6. *The DEQ must continue to update its web site that reports on beach closings and advisories and to use this information in tracking progress made in identifying and reducing the number of illegal discharges.*

Aquatic Nuisance Species

Principal Issue

There is a general consensus that the presence of aquatic nuisance species (ANS) is a major threat to the ecosystem of the Great Lakes. The large number of ANS already established in the Lakes upsets the native fishery and habitat and impacts water quality and those who depend on the water. The further introduction and spread of ANS will continue to pose even greater problems for those who work to protect the health of the Great Lakes. More must be done to develop a basin-wide regulatory program that closes all loopholes that have allowed the spread of ANS to continue.

Background

Extensive research conducted by various public and private services indicate that the health of the Great Lakes has been unquestionably affected by the introduction of ANS. To date, these observers note that approximately 140 nonnative species have been introduced into the Great Lakes basin with a principal vector being the transport of these species through the dumping of ballast water in the basin from ocean-going vessels. As more and more invasions have been tracked in the Great Lakes, it has also become apparent that unless drastic measures are taken, the health of the basin, its habitat, and the fishery will continue to decline.

The magnitude of the problem is expressed in the following statement from the Department of Environmental Quality (DEQ): *" the invasion of the zebra mussel in 1988 helped bring the serious nature of the aquatic nuisance species issue to the public eye. Prior to the zebra mussel invasion, public perception held that resource management agencies have the ability to control alien invaders. While this belief is partially true, control can only be defined as slowing or preventing the spread; range reduction of a species; mitigation of site specific conditions such as allowing for the treatment of water intake systems to remove colonies of zebra mussels; or cleaning beaches after major storm events which wash thousands of dead zebra mussels ashore. Control of aquatic nuisance species is not complete eradication of the nuisance organism from the ecosystem, rather it means a reduction in abundance or effect of the nuisance."*

There are, of course, other examples of ANS firmly established in the Great Lakes. The ruffe, a small perch-like Eurasian fish — which was introduced to the basin in the St. Louis River near Duluth — has caused a drastic reduction in the population of perch in Lake Superior. The quagga mussel, related to the zebra mussel, thrives on deeper and colder waters and has exhibited the same potential to impact water intake ports as the zebra mussel.

The round goby is another species introduced into the Great Lakes through discharged ballast water and according to the Office of the Great Lakes: "Consumption studies of fish suggests round gobies might have a detrimental impact on native species through competition for food and predation on eggs and young fish."

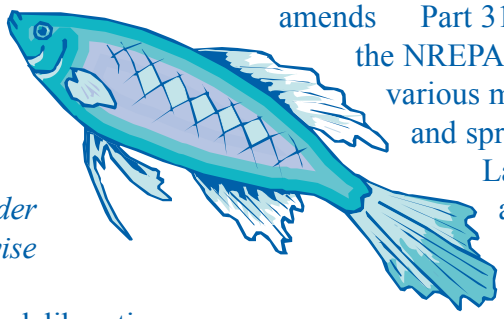
And, of course, the poster child of ANS is the venerable sea lamprey. It has been a serious problem in the Great Lakes for more than 50 years. After more than 30 years of trying to control lamprey, the parasitic invader is making a comeback at the expense of the lake trout fishery in northern Lakes Michigan and Huron. According to the DEQ, "an adult lamprey can kill up to 40 pounds of fish in just 12 to 20 months."

Various reports, studies, and investigations have consistently concluded that if we are to maintain the health of the Lakes and the related fisheries, drastic action must be taken to end these invasions. Although Congress has enacted federal laws designed to control these invasions, lack of adequate enforcement and liberal use of express exemptions from these laws have continued to provide routes for

more introductions.

Executive agency action to exempt discharges of ballast water from the protection of the Clean Water Act (CWA) afforded a large loophole for the further introduction of ANS. The rule passed pursuant to the CWA, 40 CFR section 122.3(a), which provided this exemption, helps to explain the current climate for advancing Great Lakes concerns in Washington. Those advocating control of ANS maintain that this exemption was one of the most damaging blows that has been dealt to the work to clean up the Lakes.

Current relevant water pollution controls in Michigan are found in Parts 31 and 95 of the Natural Resources and Environmental Protection Act (NREPA). Under Part 31, *"the department is to protect and conserve the water resources of the state and shall have control of the pollution of surface or underground waters of the state and the Great Lakes, which are or may be affected by waste disposal of any person."* Watercraft pollution is controlled under Part 95 and there is an express prohibition of *"any discharge of any litter, sewage, oil, or other liquid or solid materials that render the water unsightly, noxious, or otherwise unwholesome."*



However, in testimony taken during deliberation on Senate Bills 955 and 152, the DEQ admitted that it is not able to adequately enforce either Parts 31 or 95 with regard to ballast water.

Passage of the National Invasive Species Act (NISA) represented a significant attempt to control the introduction of new nonnative species throughout the country. Under NISA, there are guidelines for the development of both a national and a Great Lakes ballast water control program.

Also under the NISA, ballast exchange or treatment is required before entering the Great Lakes. However, if the ship's captain makes a declaration of no ballast on board (NOBOB) basing the declaration on the belief that he or she has no effective ballast on board the ship, the ballast exchange is not required and the ship is then effectively "outside" the regulations of NISA. Some have questioned whether this NOBOB declaration is employed too liberally as a way of getting around ballast water controls and that more scrutiny should be placed on these declarations to ensure that in fact no ballast is on board. Others maintain that despite even the most rigorous attempts to remove all ballast water before entering the basin, some ballast water may still remain. Thus, there needs to be additional efforts focused on treating ANS that might exist in that ballast water.

Clearly frustrated by the current enforcement and statutory protections, Great Lakes basin advocacy groups have called out for a more effective control program. Various stakeholder groups have attempted to study and test new ballast water control technologies; yet, technological advances have not been pushed adequately enough to result in a consensus solution, and much work remains to find a way to control the invasion of nonnative species through the dumping of ballast water.

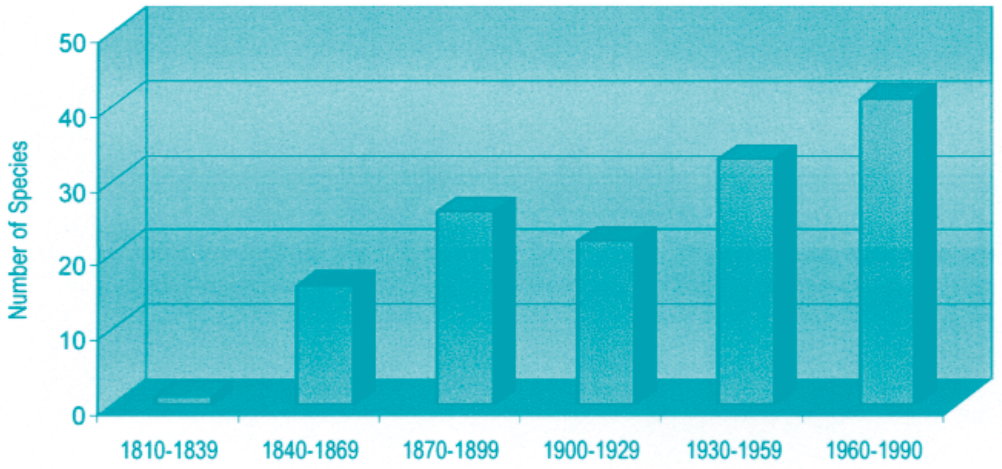
Recent legislation signed into law in Michigan (Public Act 114 of 2001) represents the most significant step made in the Great Lakes basin towards curbing the invasion of ANS. This act amends Part 31 (Water Resources Protection) of the NREPA to provide for a phase-in of various methods to control the introduction and spread of ANS within the Great Lakes. A recent appropriation amendment will dedicate $500,000 to the DEQ's work to further develop a ballast water treatment program under the parameters of Public Act 114.

Additionally, the issue of controlling ANS has received much attention from research scientists. The relatively recent "Algonorth" experiment in which a bulk carrier, the Algonorth, was retrofitted with a ballast water filtration system represents the significant efforts from both industry and the public sector to develop new treatment methods for ballast water.

Yet, significant hurdles still remain despite Michigan's efforts to control ANS. It is clear to many observers that for a comprehensive basin-wide policy, all basin states and provinces must act together, and even if acting in unison, the task is monumental. There is concern for state impact on the free flow of trade throughout the basin, impact on costs of transportation in designing and implementing new control methods into ships' ballast tanks, the lack of accepted ballast treatment technologies, the absence of an effective enforcement mechanism, and the lack of a clear mandate from the federal government.

From the Office of the Great Lakes:

Introductions of Aquatic Exotic Species in the Great Lakes



Source: Produced by the Legislative Service Bureau's Science and Technology Division based on data in Mills et al 1993

"We cannot completely stop the tide. Perfect screening, detection, and control are impossible for the foreseeable future. Nevertheless, Federal and State policies, designed to protect us from unplanned invasions and the spread of non-indigenous species, are not safeguarding our local and national interests in important areas. The conclusions of a report filed by the Office of Technology Assessment within the United States Congress (Harmful Non-Indigenous Aquatic Nuisance Species in the United States, September 1993) have a number of policy implications. First, the Nation has no real national policy on harmful aquatic introductions; and the current systems are piecemeal and lack adequate rigor and comprehensiveness. Second, many Federal and State statutes, regulations, and programs are not keeping pace with new and spreading non-indigenous pests. Third, better environmental education and greater accountability regarding actions that cause harm could prevent some problems. Finally, faster response and more adequate funding could limit the impact of those that slip through."

Testimony

The public is clearly aware of the problems posed by the continued introduction and spread of ANS. There were two or three common Great Lakes issues that the Task Force typically heard throughout the testimony, and the problems posed by ANS were clearly one of those issues. In addition, many other observers who have studied the health of the Lakes believe it to be the most critical threat to the ecosystem of the Great Lakes.

Mac Strand, Assistant Professor of Biology at Northern Michigan University, gave the Task Force a compelling account of his belief in the potential harm that can be caused by ANS:

"At a recent conference, conferees seemed to have an eery feeling that we are providing a baseline for the impact of ANS that will be used to show the tremendous negative impacts of ANS on the Lake."

According to Mark Gadden, of the Great Lakes Fishery Commission, "in order to achieve a healthy fishery the invasion of ANS must be stopped. They have had a profound effect on the ecosystem of the Great Lakes." "The importance of sea lamprey control, as an example, is that they have been enormously destructive to the fishery. The Commission has seen significant reductions in those populations, but control efforts need to be maintained."

Acting as Director of the Office of the Great Lakes at the time of his testimony, Keith Harrison indicated that better control of ANS before they enter the Lakes and then treatment of ANS already in the basin are one of the DEQ's chief priorities for improving the health of the Lakes.

Others such as Gail Gruenwald, of the Tip of the Mitt Watershed Council; and Dana Debel, of MUCC; and Tanya Cabala, of the Lake Michigan Federation, acknowledged the problem as well. Ms. Gruenwald echoed many others' beliefs "that we need to prevent further introductions of nonnative species, and if new

species are introduced, most efforts to stop them will be useless."

Industry has also been impacted by the presence of ANS. Mike Brown, of American Electric Power, told the Task Force that more than $1,000,000 a year is spent in zebra mussel treatment alone to allow for efficient operation of the Cook Power Plant and more than $400,000 in clearing out water intake ports. Compliance costs are incurred because of ANS having a huge impact on both those in the public and private sectors who rely upon water use. Attesting to the impact on the commercial fishing industry was Forrest Williams, from the Michigan Fish Producers Association. Mr. Williams listed the presence of ANS as his chief issue and stated that "the whole food web has changed as a result of ANS. Last year, gobies in the Saginaw Bay weren't even an issue for us, but this year is completely different." Mr. Williams stressed more research is needed to control ANS.

Recreation and tourism have seen significant impacts as well. Kenneth Merckel, from the Steelhead and Salmon Fishermen's Association; Robert Manning, of the Great Lakes Cruising Club; and Captain Janice Deaton, of the Michigan Charter Boat Association, all believe that ANS have impacted fishing as a recreational activity. Captain Deaton believes that the zebra mussel has had an impact on perch spawning beds and that gobies have replaced the perch in many areas. Jack Oelfke, of Isle Royale National Park, believes that the ecosystem in the park will be impacted forever if more ANS continue to be seen in the park. According to Mr. Oelfke, "even though we are very isolated out here in Lake Superior, we have been hit by ANS as well."

> "We need to prevent further introductions of nonnative species, and if new species are introduced, most efforts to stop them will be useless."

The Task Force also heard testimony that led it to believe that Congress needs to act quickly to end the various loopholes that allow ANS to enter the basin. Chuck Pistis, from the Michigan Sea Grant, applauded the recent legislative efforts on ANS in Michigan, but because the vast majority of ships enter the basin claiming NOBOB, they are exempt from regulation under federal law. In addition, Mr. Pistis believes that we must also continue to focus on intra-lake transmission.

Mike Ripley, of CORA Bay Mills, Grand Traverse Band, Soo Tribe, made a very important point regarding the federal CWA. He commended the efforts of Senator Sikkema's work on Senate Bill 152 but stated that the message needs to be sent to the federal government to start enforcing the CWA and the NISA. Terry Picard, from the Lake St. Clair Walleye Association, added that he believes federal help with ANS is needed because "the problem impacts the entire region and many different industries it serves."

Findings

A coordinated, basin-wide, and adequately enforced regulatory scheme is needed to control the spread of ANS. Critical in this regard is the elimination of the federal rule which exempts ballast water discharges from the CWA. State action which further encourages the development of a federal policy should also be supported.

Recommendations

1. *Urge the Michigan Congressional Delegation to take the lead in the repeal of 40 CFR section 122.3(a), the current CWA exemption for the regulation of ballast water.*
2. *Public Act 114 of 2001 provides a model for state legislation across the Great Lakes basin. The passage of similar legislation in the other Great Lakes states and provinces will lead to an approved technology to treat ballast water and create the impetus for federal action.*
3. *Work to establish a new Great Lakes Legislative Caucus to create an aggressive basin-wide ANS program implemented at the state, provincial, and federal level.*
4. *Public education efforts need to be increased in order to fully inform the public of the steps that individuals can take to reduce the spread of ANS. More effective notification at boat access sites, boat dealerships, marinas, and other areas could help enlist the aid of the general public in curtailing the spread of ANS. This should be a priority.*

Off-Shore Drilling in the Canadian Waters of the Great Lakes

Principal Issue

Off-shore drilling for natural gas is currently permitted in certain Canadian waters of the Great Lakes. It is a practice that is inconsistent with state and federal laws.

Background

Off-shore drilling is currently banned under Michigan law (MCLA 324. 502). Canadian Great Lakes bottomlands are considered the Province of Ontario Crown Lands and are managed by the Ontario Ministry of Natural Resources. Under Ontario Regulation 116/97, oil exploration and production by means of wells located in the water-covered areas is prohibited. However, Canadian law permits such operations for natural gas in certain waters of Lake Erie (east of a straight line drawn from the tip of Pelee Point in Ontario to Marblehead in Ohio).

Drilling began in Ontario's Lake Erie waters in 1913. As of November 14, 2001, there were 550 off-shore rigs producing 10 billion cubic feet of gas annually in the Canadian waters of Lake Erie. There are also seven directionally drilled Canadian wells beneath Lake Erie producing both oil and gas.

Some observers have noted that there are generally less severe consequences from an accident occurring at an off-shore drilling rig used to produce natural gas than one used to produce oil. The principal concern with such accidents would be damages caused to fishery habitat, along with any problems associated with the piercing of the Lake bottom.

Testimony

Given the enormous amount of public controversy over the practice of directional drilling, some observers expected more attention would be focused on urging the Task Force to put additional pressure on the Canadian government to ban directional drilling. Although no spills from these rigs in Lake Erie have been reported, there was only limited testimony from the public on this issue.

After two students from Northern Michigan University had testified expressing their opposition to directional drilling and the need to consider alternative energy uses, Senator Koivisto (a guest Task Force member) strongly cautioned the students to remember that off-shore drilling is a huge problem the Lakes face and that to him “it is really more of a potential problem than directional drilling." In response to Senator Koivisto's comments, Senator Sikkema responded that he, too, believed off-shore drilling to be more of a problem.

Findings

Off-shore drilling practices in Canada are inconsistent with current U.S. basin practices and have greater potential to harm the Lakes than directionally drilled wells.

Recommendations

1. *Request the Michigan Congressional Delegation to make the ban of off-shore drilling practices a priority item in Washington.*
2. *Send a resolution to Environment Canada, the leaders of the Ontario Provincial, and the federal Canadian governments urging the prohibition of off-shore drilling in the Canadian waters of the Great Lakes.*
3. *Ask the International Joint Commission to assess the potential for harm to the Lakes from off-shore drilling and, if it confirms that it poses significant threats, ask the Commission to mediate a request from Michigan that the practice of off-shore drilling be prohibited throughout the waters of the basin.*

Pipeline Transport of Oil and Gas in the Great Lakes

Principal Issue

The transport of oil and gas through the use of pipelines found throughout the basin is a necessary and ongoing practice that is regulated by both state and federal law. Some observers have noted that more oversight needs to be maintained to ensure the continued safety of this practice.

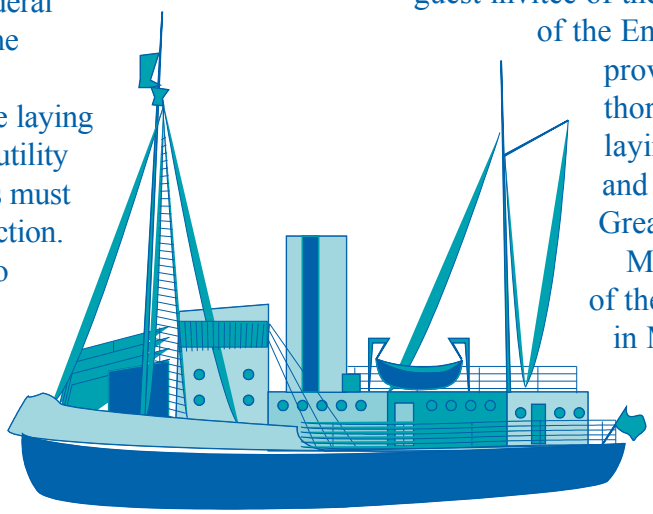
Background

According to the Geological Survey Division of the Department of Environmental Quality (DEQ), the federal Office of Pipeline Safety regulates interstate pipelines. The Michigan Public Service Commission regulates intrastate natural gas pipelines and has delegated authority to regulate interstate natural gas pipelines.

One of the chief transporters of oil and gas beneath the Great Lakes is the Enbridge Energy Partners Company, formerly Lakehead Pipeline Company. At the Straits of Mackinac, this company's pipeline carries about 530,000 barrels of oil and natural gas liquids per day.

As these pipelines cut across state and national boundaries, the federal government regulates them as "industry" within the context of the Interstate Commerce Clause. As such, federal law dictates inspection standards for pipelines both in and around the Great Lakes. However, the state may act in an agency capacity for the federal government. As a result, the Michigan Public Service Commission authorizes the laying of the pipelines for liquid utility lines, but federal standards must be followed in the construction.

Staff have identified two examples of pipeline-originated contamination involving the former Lakehead Pipeline Company. In February of 1999, the Lakehead Pipeline Company settled with the EPA Region 5 office over a Clean Water Act violation involving the release of over 2,100 gallons of crude oil into a wetland near the Mississippi River. In addition, in 1991, a spill from a Lakehead pipeline of approximately 630,000 gallons of crude oil occurred near the Prairie River in Minnesota. This spill was considered one of the worst incidents of contamination in Minnesota history.



> Much of the oil used for energy consumption in Michigan comes from western Canada.

Testimony

The most significant amount of testimony on this issue was taken at the Port Huron hearing. A special guest invitee of the Task Force, Ms. Denise Hamsher of the Enbridge Energy Partners Company, provided the Task Force with a thorough overview of the process of laying, inspecting, and monitoring oil and gas transportation pipelines in the Great Lakes basin.

Ms. Hamsher explained that much of the oil used for energy consumption in Michigan comes from western Canada and is transported in a pipeline that runs along Lake Superior in Wisconsin, across the Upper Peninsula, and under the Straits of Mackinac. She told the

Task Force that “there is a better than 50 percent chance that the oil used to heat this building came from my company's pipeline."

She went on to explain that the company has a detailed monitoring system that she described as “constant." Cracks in the pipeline are monitored with internal inspection devices keyed to measures of pressure to detect leaks. They also use a submersible vessel to visually monitor erosion problems on the Lake bottom. When asked by Senator Peters how often the submersible is used, she responded that the monitoring is done at least every five years. The Task Force seemed surprised that such visual monitoring was not done on a more frequent basis.

Although Ms. Hamsher explained that her company insists on a culture that strives for zero leaks and the pipelines are never out of their minds, she did confirm Senator DeBeaussaert's assertion that a corrosion-based leak of a pipeline had occurred near the Clinton River.

Findings

Pipeline transport of oil and natural gas occurs throughout the Great Lakes basin including within the Lakes themselves. A complex and interconnected set of federal and state rules regulate the construction, maintenance, monitoring, and safety aspects of these pipelines. Breaks and spills are infrequent, but they have occurred in the past.

Recommendation

1. *There should be a complete review of pipeline safety, monitoring, and inspections by the Michigan Public Service Commission. This review should include a clear definition of what the state role is and can be in the regulation of oil and gas pipelines.*

Commercial and Recreational Vessel Petroleum Spills

Principal Issue

There has been relatively minimal concern with the potential for large commercial spills in the Great Lakes. However, more concern has been expressed for smaller recreational vessel spills in the basin.

Background

The federal Oil Pollution Control Act of 1990 requires the preparation of oil spill response plans by all levels of government and facilities that work with substances that have the potential to cause significant and substantial harm. The United States Coast Guard (USCG) designates coastal zone areas for which area contingency plans are to be developed. The USCG Marine Safety Office for the designated zone is the federal on-scene coordinator. The area contingency plan is developed by an area committee consisting of the USCG, the EPA, the National Strike Force Coordination Center, scientific support coordinators, and local and state emergency response planning committees. Should a spill necessarily involve both Canadian and American waters in the Great Lakes, there are several joint response agreements between the two nations that would serve to coordinate a joint response.

Although these entities work together to provide for contingency plans to remediate a spill, the party responsible for the spill is obligated to take full responsibility for conducting and financing the response.

There is a significant difference between Michigan and Canadian protocol in reporting spills. Under state law, owners and operators of facilities in Michigan must report all spills of hazardous substances to the Department of Environmental Quality (DEQ). Under Part 201 of the Natural Resources and Environmental Protection Act (NREPA), spills or releases of hazardous substances greater than or equal to a certain threshold must be reported to the DEQ within 24 hours. Generally, federal standards have been adopted by reference for these reportable quantities, and the DEQ has established what they call their PEAS hotline, which is an answering service that takes spill reports 24 hours a day.

In Ontario, all spills that are likely to cause an adverse effect must be reported to the Ontario Ministry of the Environment. Reportable quantities have generally not been established for spills; instead, facilities operators are given the discretion to determine whether or not a spill will adversely impact the environment. However, once a spill has been reported, the international agreements to share information on spills will require Canadian officials to report spill information but, again, only if in their professional judgment the spill would have an adverse effect on the environment.

There was one significant spill involving a large commercial vessel, the MV Jupiter, which occurred in Saginaw Bay in 1990.

The USCG maintains a database of all reportable spills (reportable defined to be large enough to cause a sheen on the waters). In Michigan waters of the Great Lakes between the years 1990 and 2000, there were 276 total spills reported on the database. Of this total, 80 were attributed to waterborne commerce, with 196 categorized as other water activity. Of the 196 attributed to other water activity, 144 were found to have come from recreational vessels. There was one significant spill involving a large commercial vessel, the MV Jupiter, which occurred in Saginaw Bay in 1990. According to the Office of the Great Lakes, several thousand gallons of gasoline spilled into the Saginaw River. This spill was responded to

by the Coast Guard and the Department of Natural Resources' (DNR) Surface Water Quality Division.

Given the large number of unreported smaller recreational vessel spills in the Great Lakes and connecting waterways, there is a great likelihood that significant pollution of the Lakes occurs from recreational vessel spills.

Contamination by recreational vessels in Michigan waters is prohibited under Part 31 and, more specifically, by Part 95 of the NREPA. Under Part 95, both commercial and recreational vessels are covered under the prohibition that reads: "A person shall not place, throw, deposit, discharge, or cause to be discharged into or onto the waters of this state, any litter, sewage, oil or other liquid or solid materials . . . ."

According to the DEQ, there are also located in the Great Lakes off-shore fueling facilities of a mobile nature. These presumably are refueling vessels used to fuel commercial vessels to allow them to avoid coming into port for refueling.

Testimony

The issue of commercial and recreational spills did not receive significant amounts of testimony during the hearings. However, several mentioned a potential for large commercial shipping spills along with the largely unnoticed amount of smaller recreational vessel spills.

> The Coast Guard's response to spills in the Great Lakes indicated that "if there is an oil spill in the Great Lakes, we are going to be there!"

In Port Huron, USCG Commander Pat Gerrity recapped the Coast Guard's response to spills in the Great Lakes by indicating that "if there is an oil spill in the Great Lakes, we are going to be there!" They are generally going to be the first responders to a spill, but Commander Gerrity reminded the Task Force that although the Coast Guard works to ensure that the spills are cleaned up properly, it is the entity causing the spill that is responsible for the cleanup. That entity must reimburse the Coast Guard and any other responding party for costs incurred in the cleanup.

Upon being asked by Senator Byrum as to whether the current notification protocol was adequate, Commander Gerrity explained that one of the things that people need to be reminded of was that any noticeable sheen on the water should be treated as a reportable spill and that the Coast Guard maintains an 800 number to take complaints.

Mark Richardson, Assistant Prosecuting Attorney for Water Quality for Macomb County, spoke on his own behalf in urging the Task Force to consider that Michigan has been lucky in the area of spills because catastrophic spills have been very rare. However, numerous smaller spills have the potential to be equal to or greater than even one large catastrophic spill. He commented that the Task Force could look at the disparity between the spill reporting practices of the United States and Canada.

Findings

Although spills from large commercial vessels have occurred and are always possible, the smaller, more numerous spills from recreational watercraft pose more of a problem on a consistent basis. U.S. and Canadian reporting protocols are inconsistent.

Recommendations

1. *Establish more effective education methods to alert recreational watercraft owners to the dangers of smaller spills, such as notices on marina gas pumps and at the time of sale of marine engines and watercraft. Further publicize both the current USCG and DEQ spill response hotline.*
2. *Encourage greater coordination between the USCG and state and local enforcement agencies on "smaller" spill response.*
3. *Consider implementation of anti-spill refueling devices on either vessels or at the gas pump.*
4. *Ask the International Joint Commission to conduct an analysis of Canadian and U.S. spill reporting protocol and make recommendations to the appropriate bodies for changes to ensure a consistent, basin-wide response.*

NPDES Permitting System

Principal Issue

There is the general perception that the state's National Pollutant Discharge Elimination System (NPDES) program must be changed to reflect current water quality needs. Some have noted that the ethic of preventing pollution has not been incorporated into the program. In addition, the review and enforcement of permit conditions remain an issue for the public.

Background

According to the Department of Environmental Quality (DEQ), the primary tool for controlling water pollution in Michigan is the NPDES established in 1972 under the federal Clean Water Act (CWA). The EPA delegated authority to Michigan to run its own permitting program in 1973.

Also, according to the DEQ, there is an enormous diversity of permits because all point sources need permits, from automobile plants to laundromats. The concept of the CWA is to move towards the goal of "zero discharge." This goal is reached through treatment technology based effluent limits (TTBELs) and water quality based effluent limits (WQBELs). TTBELs are based on federal regulations and are promulgated by the EPA based on the type of facility. WQBELs are based on State Administrative Rules and are promulgated by the DEQ based on the designated uses.

According to information compiled by the DEQ, there are currently 233 permits to discharge directly into the Michigan waters of the Great Lakes. These permits are issued for a five-year period:

- 125 for direct discharge into the Great Lakes
- 23 for direct discharge into Lake St. Clair
- 49 for direct discharge into the St. Clair River
- 33 for direct discharge into the Detroit River
- 3 for direct discharge into the St. Mary's River

The total number of NPDES permits issued in the entire state (both Great Lakes and other water bodies in Michigan) effective at this time is 4,874 permits. These permits are effective for five-year terms.

A breakdown of these permits would look like this:

- 681 individual general permits (for more complicated and substantive discharges)
- 836 non-stormwater certificates of coverage (routine application)
- 3,357 stormwater discharges

One of the principal concerns voiced during the hearings was the department's reputed inability to review and enforce NPDES permits prior to the end of the five-year life of the permit. From a historical standpoint, this concern has some validity. In Fiscal Year 1995, there were 975 expired individual permits still in effect, along with a backlog of 103 new or increased-use applications before the department. That year was the zenith of the department's enforcement and permitting review problem.

Since that time, however, both the number of expired permits and new and increased-use permit applications have decreased to the point where in Fiscal Year 2001, there were 19 expired permits still in effect along with a backlog of only one new or increased-use application. Other states have similar concerns with NPDES permit backlogs, and the EPA is required to report to Congress on the national backlog. Recently, the EPA recognized Michigan's backlog reduction success.

On the issue of enforcement, the DEQ does in fact rely upon self-monitoring of the discharge by the facility itself. Reports are then entered into the DEQ database, but the DEQ also has a random auditing program in an attempt to make sure the industries are discharging what they say they are discharging. These audits are not conducted regularly but are

done according to the DEQ “somewhere between once a year or maybe once every five years." There are enforcement measures behind this self-monitoring system based on violations of time frame limits and effluent levels. There is also civil and criminal enforcement authority provided to the department.

The Task Force has requested that the DEQ produce a chart that portrays how often a pollution standard was violated and also how many times, over a 20-year period, enforcement actions have been taken.

In addition, testimony also indicated that the department does not assess fees for issuing NPDES permits, unlike many other states that receive significant funding for various water quality programs from NPDES permits. Michigan law, in fact does not authorize collection of a fee for NPDES permits.

The DEQ indicated that it currently spends approximately $3 million for permitting, monitoring, and ensuring compliance under the NPDES program.

According to testimony provided by the DEQ, “In the late 1970s, Michigan had a surveillance fee which apparently was repealed due to the problem with assessing an equitable fee. That statute provided for both a maximum and a minimum fee, along with an appropriation from the General Fund. This fee system raised a significant revenue, but when they were eliminated, the General Fund was used to support the program."

Various fee proposals have been discussed by the department since the repeal of this system, with one proposal being drafted in the early 1990s. Given the need for funding of water quality enhancement programs at both the state and local levels, and the significant amount of revenue that could be generated by even a modest fee assessment, implementation of a system has been strongly suggested by many observers.

There has been some general discussion that this program, which is almost 30 years old, should be the subject of a comprehensive review to ensure its compatibility with other DEQ water quality programs and to ensure that its focus is set on current water quality needs in the state.

Testimony

As indicated in the testimony provided by the DEQ's Bill McCracken, the NPDES program is the state's chief method for controlling water pollution in the state. Many observers believe that more attention needs to be focused on this program. In the “Blue Water Task Force Report on Water Quality,” recommendations have been made to more fully fund this program to ensure that impaired sites requiring total maximum daily load (TMDL) development are properly monitored and are kept on their TMDL schedule. In addition, more effort needs to be expended to identify community dumpsites and other potentially significant sources of point source pollution. Finally, the report suggests that industries with point source discharges should be required to equip their facilities with “real time continuous biomonitors to monitor discharges."

Fred Fuller, the St. Clair County Drain Commissioner, also agreed with the need for additional funding of this program by saying that “the lack of enforcement and monitoring done by the DEQ on NPDES permits is a function of funding and focus of proper resources, and when that focus is not there, proper enforcement will not be there either." He mentioned that he feels the effect of this state's lack of focus in his office as well.

James Clift, of the Michigan Environmental Council, also felt that more money needs to be put into pollution prevention and the NPDES permitting program. He supported the notion that the state should reduce its reliance upon permitting pollution and cause dischargers to consider alternative forms of dealing with waste and pollution. He noted that the current NPDES permitting program does not require dischargers to pay fees and that this would be a significant source of revenue to fund improvements in water quality and help to limit discharges at the same time.

Carl Marlinga, Macomb County Prosecutor, told the Task Force that the DEQ “is too small and has too few inspectors” and gave as an example a 1978 NPDES permit that had been issued in Macomb County that is still in effect with no oversight. “The problem we have with the Twelve Towns sewage problem is that the DEQ did not have the resources to discover this problem."

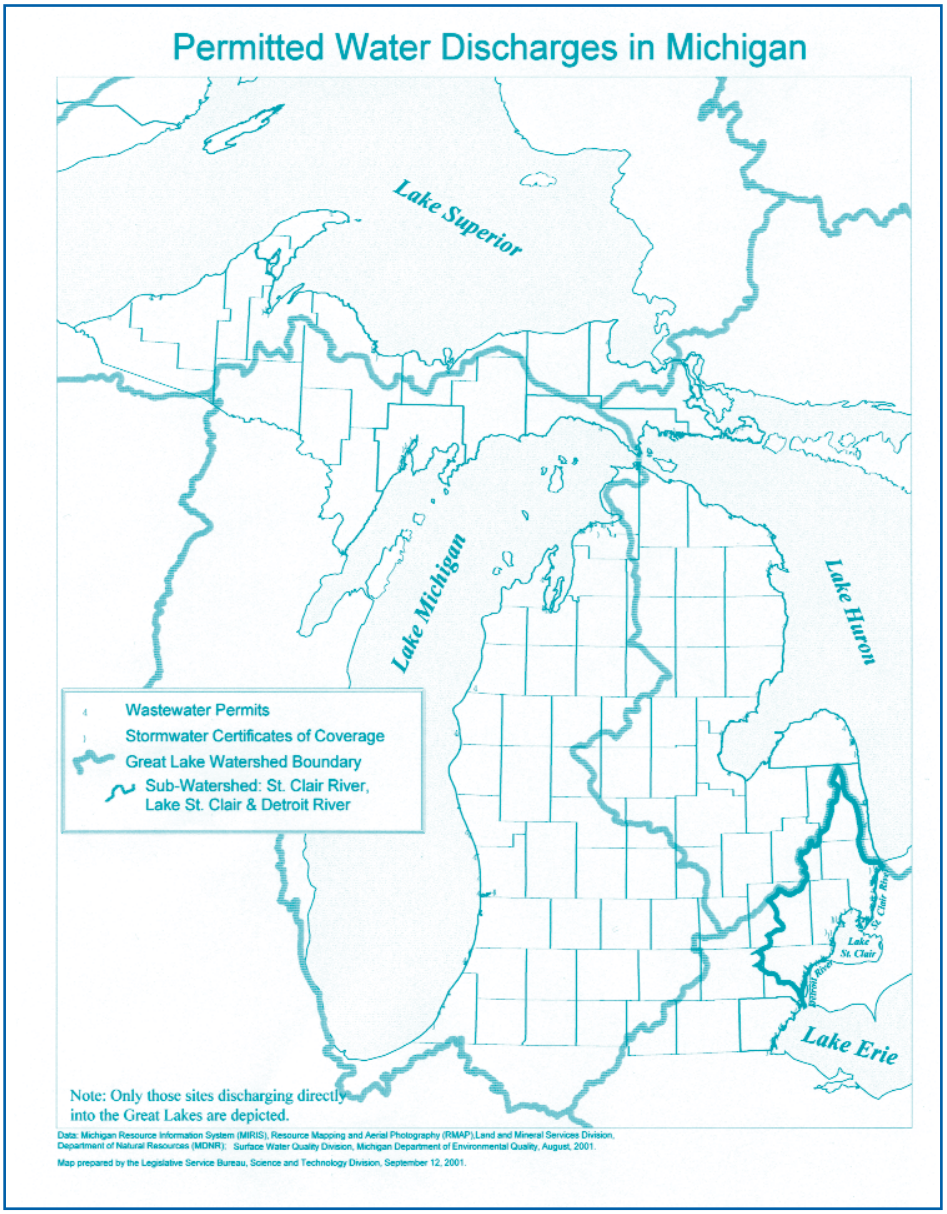
Findings

There is a general perception that more needs to be done by the DEQ in reviewing both current and new permits under the NPDES program, along with a more aggressive enforcement of permit conditions to help to ensure a reduction in point source discharges and the

elimination of new sources. The department has made significant reductions in permitting backlogs, but maintaining a vigilant program would be greatly assisted by a new funding source coming from fees assessed against permitted discharges.

Recommendations

1. *Consider implementing a NPDES permit fee which covers initial and renewal application review, surveillance, monitoring activities, and enforcement costs.*
2. *The state must conduct a more thorough and comprehensive review of the entire Michigan NPDES program to ensure that this 30-year-old program is focused on current water quality problems. In addition, there must be continued legislative scrutiny over the NPDES permitting backlog and the number of expired NPDES permits still in effect and general DEQ enforcement of NPDES permits.*
3. *Change the NPDES permit application process to require the applicant to first demonstrate that all reasonable steps have been taken to prevent point source pollution.*
4. *The NPDES permit program should be linked directly to the DEQ's Water Quality Monitoring Program in order to provide a reliable data source for the issuance and monitoring of NPDES permits.*



Enforcement of Environmental Protection Laws

Principal Issue

Enforcement of the law is a key ingredient for protecting Michigan's environment.

Background

Ultimately, the key to building a healthy environment lies in education. As the citizenry at large develops a fuller understanding of the dynamics of the environment and the role of human beings in both degrading and protecting that environment, fundamental progress will be achieved. However, faithful enforcement of the law will continue to play an important role in protecting the Great Lakes.

There are several aspects of enforcement that present difficult public policy choices, particularly in a democracy. By its nature, enforcement involves an element of compulsion. Most people do not enjoy being told what to do. This tension leads to conflicts and has lead to recent changes in departmental policy that emphasize developing a sense of cooperation between the enforcer and the enforced. While there is little question that cooperation will yield the best results, continued progress in protecting the Great Lakes should not be sacrificed in order to prevent conflicts. A proper balance must be struck that recognizes the proper role of both cooperation and compulsion.

Ultimately, the key to building a healthy environment lies in education.

Many of those who testified at the Task Force hearings expressed serious concerns regarding enforcement of the law. Those concerns not only related to the direct impact of insufficient enforcement, but also to the incentives and disincentives that are created as a result of insufficient enforcement.

However, in many cases, expressions of concern regarding enforcement intersected with other concerns that related more closely to other differences. In many cases, enforcement concerns were found, upon closer examination, to actually be sincere disagreements regarding basic policy decisions that have been made by the Legislative and Executive Branches of government. Other cases reflected differences in the interpretation of statutes and rules. While in some instances concerns regarding staffing of enforcement agencies were well-grounded, the resulting criticism of enforcement efforts failed to account for the fact that with limited resources, enforcement activities have had to be prioritized. Furthermore, in some instances, those who testified before the Task Force were unaware of pending enforcement actions at both the state and federal levels.

Testimony

Bob Russell, the Chair of the Board of Grand Traverse Public Works, expressed his frustration in trying to work with other local governments in his area on a long-term solution to the disposal of septic sludge. While new disposal requirements had been promulgated, Mr. Russell said the lack of follow-up in enforcing these new standards had led some local governments to conclude that the state was not serious, and that they need not make disposal a policy and funding priority. He said that as a consequence, the project drifted, resulting from a lack of both focus and resolve.

Gail Gruenwald, of the Tip of the Mitt Watershed Council, expressed concern that state agencies did not adequately enforce rules preventing excessive

beach "grooming." She explained that this happened when vegetation on Great Lakes bottomlands, owned by the state and regulated by both the state and the U.S. Army Corps of Engineers in the public interest, was exposed when water levels were low. Lakeside residents removed the vegetation for aesthetic reasons and sometimes shifted sand deposits to cover muddy areas. This, Gail explained, endangered fish habitat when Lake levels returned to higher points, and the exposed bottomlands were once again submerged. However, her perspectives differed markedly from those of Ernie Krygier and Joe McBride, members of Save Our Shorelines, who felt the level of enforcement of grooming by the Department of Environmental Quality (DEQ) and the U.S. Army Corps of Engineers was oppressive. The concerns regarding enforcement in this instance reflected disagreements over basic policy questions of protecting fish habitat during times of low water levels.

> "You need watchers to watch the watchers - DEQ does not do the job of enforcing the laws."

At the Monroe hearing, Kathleen Law, an official in Gibraltar Township and the Chair of the Detroit River Area of Concern Council, expressed concern both with the Detroit wastewater treatment plant's lack of compliance and also with the failure to enforce rules forbidding the discharge of de-icer chemicals used at airports. Both situations, she stated, would be easier to enforce with a more complete water quality monitoring system. Her concerns were echoed by Leonard Mannausa, the president of the Lake Erie Advisory Committee and the River Raisin Action Committee, who also expressed frustration that de-icer spills from Detroit Metropolitan-Wayne County Airport (Metro Airport) went unpunished, while less culpable violators were hauled into court. It should be noted that further research into the de-icer claims found that the DEQ, EPA, and the Michigan Attorney General's office have engaged in discussions with Metro Airport regarding an incident that occurred May 16 and 17, 2001, and that the U.S. Department of Justice is pursuing a criminal investigation. Also in Monroe, Tom DeFew, a planning commissioner, criticized the state for issuing storm water discharge permits based on studies provided by the parties the state was regulating and cited one situation involving London Sands in which the state had allegedly failed to ticket a violator in spite of, from his perspective, violations which had occurred for several years.

Pollution of the Red Run Drain by leaching contaminants from a nearby landfill was the topic of comments from Steve Wojno and Michael Rath, both from Sterling Heights. Both stated they were frustrated over the failure of enforcement. Mr. Rath alluded to a meeting in Mount Clemens at which state officials indicated there were only six staffers enforcing landfill rules for the entire state. Carl Freeman, a professor at Wayne State University, suggested the creation of an independent position to audit the performance of enforcement agencies, stating "You need watchers to watch the watchers — DEQ does not do the job of enforcing the laws."

Viewing the issue of enforcement from a slightly different angle, Carl Marlinga, the Macomb County Prosecutor, emphasized his view at the hearing in Port Huron that state agencies should be enforcing environmental laws but fail to employ enough staff to do so. He pointed out that his office had assigned an assistant prosecutor to prosecuting environmental violations but strongly felt that this responsibility should be shouldered by the state. His views were echoed by his assistant, Mark Richardson.

Fred Fuller, the St. Clair County Drain Commissioner, described enforcement efforts as insufficient and raised the question that if directional

drilling were to be permitted, what assurances could be given that the drilling operations would be properly monitored to ensure they comply with applicable laws and rules?

Cyndi Roper, of Clean Water Action, raised concerns about enforcement reporting, citing a study her organization had made that found the DEQ's web site report of sewage overflows did not correctly reflect the reports of local health departments. She suggested that a deadline for reporting sewage overflows on the web site should be set.

> Proper enforcement is not possible without a comprehensive monitoring program.

Many people who testified regarding enforcement issues brought up water quality monitoring, relating that proper enforcement is not possible without a comprehensive monitoring program. Most viewed current monitoring efforts as inadequate and hoped for state financial support in particular for monitoring recreational beaches.

Findings

It appears to some segments of the public that enforcement of environmental laws is inadequate. While in many instances these concerns would be more properly focused on policy disagreements and differences of interpretation, in some instances legitimate enforcement issues have arisen, at times due to inadequate staff. In fact, state agency staff are said to have publicly commented in at least one situation that was related to the Task Force that staffing is not adequate to discharge the agency's responsibilities to the public. Because the power of appropriation is held by the Legislature, it is primarily the Legislature's responsibility to conduct adequate oversight to ensure that enforcement activities are properly funded.

Recommendations

1. *The Legislature should insist on full staffing of enforcement agencies. The legislative committees with responsibility for environmental enforcement issues need to take an active role in overseeing enforcement efforts to ensure they are adequate.*
2. *The Appropriation Subcommittees for the Departments of Natural Resources and Environmental Quality, in particular, should closely examine the question of what resources are needed to properly enforce existing protection laws and work to develop budget recommendations that reflect those needs.*
3. *The Executive Branch needs to carefully assess enforcement needs and push for the resources to fulfill those needs during the appropriations process.*

Airborne Toxics

Principal Issue

Significant water quality problems are caused by airborne emissions of harmful substances.

Background

The pollution of the Great Lakes by chemicals transmitted through the atmosphere is a relatively recent topic of scientific study. Although much work remains to be done in understanding the source and deposition of airborne toxics, it is clear that all of the Great Lakes suffer in varying degrees from contamination caused by human activities which place toxic substances into the air, and which in turn fall to the waters below.

The U.S. Environmental Protection Agency and Environment Canada, in their joint publication "State of the Great Lakes, 2001," have determined that Lakes Huron, Michigan, and Superior all suffer from mixed prognoses, in part due to contamination from airborne sources.

The International Joint Commission (IJC) has identified 11 chemicals of particular concern because of their toxicity, persistence in the ecosystem, and ability to bioaccumulate to levels that threaten human health and the ecosystem. These chemicals are:

- Total polychlorinated biphenyls (PCBs)
- Mirex
- Hexachlorobenzene
- Dieldrin
- DDT and metabolites
- 2,3,7,8-tetrachorodibenzo-*p*-dioxin (TCDD)
- 2,3,7,8-tetrachlorodibenzofuran (TCDF)
- Benzo(a)pyrene
- Alkylated lead
- Toxaphene
- Mercury

In some cases, the production and use of some of these chemicals has halted in the United States and Canada, yet remaining amounts of these substances continue to find their way into the Great Lakes through atmospheric deposition. Examples of such substances include PCBs, DDT, dieldrin, and toxaphene. Other substances, such as dioxins and mercury, continue to be emitted into the atmosphere as by-products of industrial processes. Dioxins are chemicals formed during the combustion of materials that contain chlorine. Incineration of plastics, the manufacture of certain herbicides, and chlorine bleaching of pulp and paper have historically been major sources of dioxins. Mercury is emitted from the incineration of some types of medical equipment, electrical switches, and fluorescent lamps, but even more significantly, from the burning of coal for the production of electricity.

The Great Lakes suffer in varying degrees from contamination caused by human activities which place toxic substances into the air, and which in turn fall to the waters below.

Because of the dynamic nature of airsheds, the sources of Great Lakes contamination could include operations from other states or countries. Efforts to model the transport of contaminants in the air have met with only mixed success to date. However, there seems little doubt that Michigan sources have a significant impact on the well-being of the Great

Lakes. According to the Office of the Great Lakes, 71 percent of atmospheric depositions of dioxins found in Lake Huron originates from states surrounding the Great Lakes, 4 percent from Ontario, and 25 percent from sources outside the Great Lakes basin.

Mercury has received special attention from the scientific community for several reasons. It is persistent and bioaccumulative. Because it is an element, it is not degraded by combustion. It is a neurotoxin, causing serious damage to the brain and nervous system in humans, especially developing fetuses, as well as damage to other wildlife. Mercury emitted into the environment accumulates in aquatic systems, is ingested, and bioaccumulates in fish. Forty states have issued mercury-related health advisories regarding fish consumption, with ten states issuing statewide advisories. In 1989, Michigan issued a statewide advisory for all 11,000 inland lakes, in most cases limiting fish consumption from those bodies of water to no more than once per week. In addition, dozens of heavily contaminated inland lakes have been designated as "mercury lakes" by the Michigan Department of Environmental Quality, most of them due to atmospheric mercury contamination.

Forty states have issued mercury-related health advisories regarding fish consumption, with ten states issuing statewide advisories.

In 1996 the Michigan Mercury Pollution Prevention Task Force issued a report in which estimates of the sources of atmospheric mercury were listed. The largest source, by far, was from coal-burning electric utilities, which accounted for 48 percent. The second largest source was from municipal incinerators, which accounted for 28 percent. Hospitals and other waste incinerators counted for 12 percent, with cement and lime manufacturing and other sources accounting for the remaining 12 percent.

Testimony

The Task Force received testimony from several sources indicating concern for the impact of airborne toxics on the Great Lakes. Keith Harrison, the Acting Director of the Office of Great Lakes, listed airborne pollutants among his top concerns for the Great Lakes. Jim Lewandowski, a charter boat operator, also testified regarding such pollutants, expressing concerns that increased concentrations of mercury could affect the fishing tourism business. More academic concerns were expressed by John Webers, a Northern Michigan University professor who has studied the Great Lakes. Perhaps the most chilling testimony came from Jack Oelfke, a biologist stationed at Isle Royale National Park, who testified to increasing levels of mercury in the waters in and around Isle Royale, in spite of the fact that there is no direct source and the park's location is hundreds of miles from significant airborne sources.

Findings

Some toxic substances that have been banned in the United States and Canada will gradually be cleansed from the Lakes through natural or human actions. However, the long-term health of the Great Lakes and the organisms that depend on them, including human beings, have the potential of being seriously compromised by the continued emission of airborne pollutants such as dioxins and mercury.

Recommendations

1. *Airborne toxics must be reduced. Mercury, in particular, poses a severe threat that must be fully addressed. Coal-burning power plants must be required to reduce their emissions of toxic substances.*
2. *Operators of waste incinerators must reduce the amount of materials burned that introduce toxic substances into the air.*
3. *We must continue to search for less harmful alternatives to products that contain toxic substances.*
4. *To promote a better public understanding of some of these challenges, the state's biennial report on the state of Michigan's environment should include additional indicators of mercury contamination and other pollutants.*

Areas of Concern

Principal Issue

The Areas of Concern program plays a vital role in rehabilitating some of the most polluted waterways in Michigan.

Background

The Areas of Concern program is an outgrowth of the 1972 Great Lakes Water Quality Agreement between the United States and Canada, a bilateral agreement under which the two nations have pledged to work together to resolve the environmental problems facing the Great Lakes. Pursuant to this program, 42 locations have been designated as "Areas of Concern (AOC)," 14 of them in Michigan. AOCs are watersheds along the Great Lakes suffering from degraded environmental conditions due to past and/or on-going contamination. This contamination is generally of a highly toxic nature. As such, the 14 AOCs in Michigan represent some of the most serious pollution challenges facing Michigan.

The Michigan AOCs, locations and a brief description of the nature and source of contamination follow below:

Torch Lake — heavy metal contamination from copper mining, milling, and smelting.

Deer Lake — mercury contamination from mining research work.

St. Mary's River — oils and greases, suspended solids, metals, phenols, ammonia, bacteria, and polyaromatic hydrocarbons (PAHs) from steel plants, wastewater treatment plants, and a tannery.

Menominee River — arsenic, mercury, polychlorinated biphenyls (PCBs), and oil and grease from paper plants and a furniture factory.

Manistique River — PCBs, oils, and heavy metals from sawmills, paper mills, and various small industries.

White Lake — PCBs, chlordane, and mercury from a chemical factory and a tannery.

Muskegon Lake — PCBs, mercury, industrial waste water from wastewater treatment plants, and local industries.

Kalamazoo River — PCBs from de-inking operations at local papermills.

Saginaw River and Saginaw Bay — PCBs, dioxins, furans, chlorinated organic pesticides, cadmium, chromium, copper, lead, nickel, and zinc from municipal wastewater treatment plants and assorted industries.

St. Clair River — chlorinated organic compounds, heavy metals, oils and greases, phenols, and suspended solids from petroleum and chemical industries, combined sewer overflows (CSOs), sewage treatment plants, and various industrial spills.

Clinton River — metals, PCBs, pesticides, and other organics from various industries and municipal wastewater treatment plants.

Detroit River — bacteria, PCBs, PAHs, metals, industrial discharges, oils and greases, CSOs, and municipal waste from various industries and municipal wastewater treatment plants.

Rouge River — CSOs, urban storm water discharges, nonpoint source pollution, and municipal and industrial discharges from a variety of municipal, industrial, and other uses.

River Raisin — PCBs from automobile manufacturers.

These locations suffer from a variety of use impairments, such as restrictions on wildlife and fish consumption, beach closures, drinking water restrictions, and loss of fish and wildlife habitat.

To combat these problems, a Statewide Public Advisory Council was established. This statewide council works in turn with several local public advisory councils. Working in conjunction with other federal, state, and local agencies (and where appropriate, with agencies of Canada and Ontario), the Advisory Council has made significant progress in identifying the problems at the AOCs, leading to the development of Remedial Action Plans (RAPs).

Testimony

The Task Force was privileged to hear from several people who worked with public advisory committees of the AOCs program. In some instances, RAPs have been implemented, although much work remains to be done. Daniel Stefanski cited the removal of thousands of dump trucks full of contaminated sediment as a major accomplishment in addressing the problems of the River Raisin AOC. Keith Harrison, of the Office of the Great Lakes, indicated that addressing the problems of AOCs is long and costly. Major obstacles to implementation of RAPs have included protracted litigation over environmental liability and high costs of remedial actions. However, some people testified to the Task Force that the challenges facing AOCs are not all issues of resolving contamination. Richard Micka, of the Lake Erie Clean Up and Advisory Committee, indicated that one major issue he was facing was in delisting the AOC he was working to remedy. His opinion was that delisting was too difficult.

Major obstacles to implementation of RAPs have included protracted litigation over environmental liability and high costs of remedial actions.

However, most people who testified on the AOC program emphasized that while the state had played a helpful role, much more could be done if the state would allocate more resources in support of the program. In written testimony provided by Kathy Evans, the chair of the Statewide Public Advisory Council, she asked for the Task Force to support three key AOC priorities. These included:

1. *Providing more staff support from the Department of Environmental Quality (DEQ) for AOC programs. Fewer than two DEQ staff are available to administer cleanup and delisting efforts for all of Michigan's AOCs. Ms. Evans pointed out that this lack of support has not only hampered the effectiveness of AOC cleanups but has also resulted in the failure to exploit available federal resources due to a lack of matching efforts. She called for allocating at least eight staffers to AOC programs in Lansing and in district offices.*
2. *Provide more support for local public advisory committees. Ms. Evans cited the DEQ's action in 1996 delegating "primary leadership responsibility" for AOC cleanups to the local council. However, she indicated that these local councils have not been provided with enough resources to effectively shoulder this significant responsibility.*
3. *Maximize federal resources by providing matching state efforts. Ms. Evans pointed out that more than $50 million is available from the U.S. Army Corps of Engineers for sediment remediation, environmental dredging, aquatic restoration, and related activities. She called for the DEQ to make a concerted effort to leverage such resources from federal programs.*

In addition to these concerns, Ms. Evans also asked that Clean Michigan Initiative funds continue to be made available for RAPs and lakewide management plans, that efforts be made to persuade the federal government to provide more funding for resolving environmental threats to the Great Lakes, that funding mechanisms be found for local sediment management authorities to speed up sediment clean-up activities in waterfront areas, and that a comprehensive water monitoring program be established that would assist AOCs in assessing contamination and the results of clean-up efforts.

Findings

The AOC program has played an extremely valuable role in focusing sustained efforts on both preventing the further degradation of and the clean-up of some of the most serious pollution problems in and around the Great Lakes. The specific source and nature of some of the most pernicious contamination problems have been identified, further contamination has been prevented, and, in some cases, significant progress has been realized in restoring these sites to good environmental health. However, a modest investment of resources by the state would result in faster progress by empowering both state and local public advisory councils and by harnessing available federal assistance. Questions arise regarding why the DEQ has not played a more significant role in supporting and promoting the AOC program.

Recommendations

1. *The state needs to play a more aggressive role in supporting the AOC program.*
2. *If the state continues the policy of placing the local public advisory councils in the position of asserting primary responsibility for clean-up efforts, more technical assistance must be afforded to the local council by the state.*
3. *Where matching federal funds are available, the state needs to make the effort to qualify for these funds as this support is essential to completing RAPs and delisting sites.*

Land-Based Issues

Principal Issue

The quality of the Great Lakes is strongly impacted by activities that occur on land.

Background

Because Michigan is the only state wholly located within the basin of the Great Lakes, land use has a critical impact on the health and well-being of the Lakes. Virtually every waterway in the state eventually flows into the Great Lakes, and every use of land that affects such waterways therefore has an impact.

This interface between the land and the water has been recognized in various statutes enacted by the State Legislature. These statutes include protections for wetlands and critical sand dune areas. However, one aspect of land use that has not been fully integrated with water impact is land use planning and zoning.

Michigan was a pioneer in the enactment of a wetlands protection law and has been delegated the authority to continue to regulate such issues by the federal government.

The Task Force heard from several individuals and organizations that were concerned with land-based issues that impact the Great Lakes. Probably the issue that drew the most attention was the preservation of wetlands. Michigan was a pioneer in the enactment of a wetlands protection law and has been delegated the authority to continue to regulate such issues by the federal government. However, Michigan's law contains significant exemptions from regulation and grants considerable discretion to the Department of Environmental Quality (DEQ) in implementing the law.

Wetlands are a vital part of the interface between land and water. Wetlands provide an important habitat for various species of fish, birds, and animals. Wetlands also play an important role as natural filters, helping to keep the water clean and suitable for use by humans and other creatures. Direct and indirect disturbance of wetlands can impair these beneficial traits.

However, in spite of the fact that science has become increasingly aware of the importance of wetlands, their protection has become controversial in recent years. Landowners whose holdings include wetlands have become frustrated that they are unable to work with their land according to their own wishes. This backlash against wetlands protection has resulted in political pressure on elected officeholders to ameliorate the impact of the law. According to many who testified before the Task Force, this political pressure has taken the form of looser enforcement of wetlands law, increasing willingness to issue permits to fill in wetlands in marginal cases and permitting landowners to make up for filling in wetlands by allowing them to "mitigate" the impact by creating artificial wetlands.

Testimony

It is not surprising that the bulk of testimony regarding wetlands issues was received in Monroe and Roseville. Significant expanses of wetlands historically existed in the western basin of Lake Erie and around Lake St. Claire. Many of those who testified, such as Theresa Bea Flynn, Jerry Cohen, and Marion Touscany, expressed alarm regarding the filling of what wetlands still remain. Ron Spitler, of the Michigan Bass Federation, echoed the concerns of many when he explained that the loss of wetlands impacted fishing by depriving many species of fish

of habitat. Peggy Kennard, a member of the Macomb County Commission, stated that she felt the DEQ permitted wetlands mitigation far too liberally. Carl Freeman, a professor at Wayne State University, said that far too many permits were being issued allowing wetlands to be filled in. Tim Killeen specifically discussed the exemptions in the wetlands laws for wetlands under five acres in size and expressed support for currently pending legislation to narrow this exemption.

The regulation of land development and its consequent impact on the Great Lakes was also a frequent topic of testimony. While Michigan's land use laws allow consideration of environmental issues when local planning agencies develop master plans, there is little substantial guidance to local authorities, who continue to make the vast majority of land use decisions.

Development impacts Michigan's water in several ways. One of the most obvious is the creation of impervious surfaces through the construction of roads and parking lots. Residues from automobiles collect on such surfaces and are flushed into the waterways by rain and snow. The elimination of open land, which normally absorbs precipitation, results in the direction of water through storm drains. This, in turn, can accelerate the rate of movement of water, resulting in the erosion of sediment. The development of housing next to lakes, rivers, and streams has become increasingly popular and has resulted in the encroachment of development on critical areas adjacent to waterways, magnifying the effects discussed above.

Tanya Cabala, of the Lake Michigan Federation, included a discussion of the impact of development in written testimony submitted to the Task Force and warned that development worsened non-point source pollution problems. She recommended examination of laws in Wisconsin that mandated zoning for shorelands, wetlands, and flood plains. Frank Nagy agreed that new laws are needed to protect flood plains to ensure that the water cycle remained unimpeded, and Judith Allen indicated that more protection is needed for coastal zones in general.

Another problem that was addressed by those who testified before the Task Force was that of concentrated animal feeding operations (CAFOs). Such operations may involve several thousand animals, creating significant challenges for disposing of their manure. The regulation of CAFOs has become very controversial due to the decision by the DEQ to exempt such operations from the requirement of obtaining a National Pollution Discharge Elimination System permit. It is the DEQ's position that such operations are not permitted to discharge manure into the state's waters under any circumstances, and hence it makes little sense to issue discharge permits. However, the department's position is being reviewed by the EPA after concerns were expressed by some Michigan residents. While some individuals such as James Clift, of the Michigan Environmental Council, took issue with the department's position, most agreed that the true solution was in developing a comprehensive water quality monitoring system that would detect illegal discharges and provide the means for locating and prosecuting violators.

> The loss of wetlands impacted fishing by depriving many species of fish of habitat.

A similar problem caused by creatures of a different kind was the impact of large mobile home developments on local watersheds. Virginia Wegienke testified in Monroe that the DEQ often permitted such developments in spite of the disproportionate impact that the on-site sewage disposal systems have on local water quality.

The protection of sand dunes was also a topic of discussion. Tanya Cabala's written testimony pointed out that since 1976, when the state began regulating sand dune mining, the number of mining sites has increased from 15 to 20, and dune acreage in permitted mining areas has jumped from 3,228 acres to 4,884

acres. She expressed the concern that current laws contain too many loopholes and are poorly enforced by the DEQ. Sand dunes are mined principally for use in making glass, often for automobiles. Ms. Cabala pointed out that sand found in areas other than dunes was also usable for these purposes and that the Ford Motor Company had embraced a policy of not using dune sand for making glass for its automobiles. She suggested that other automobile manufacturers should follow suit, endorsed legislation which narrows the exceptions found in current law, and urged the phasing out of sand dune mining by 2006.

The effects of declining Lake levels on shorelines attracted the attention of a group called Save Our Shorelines.

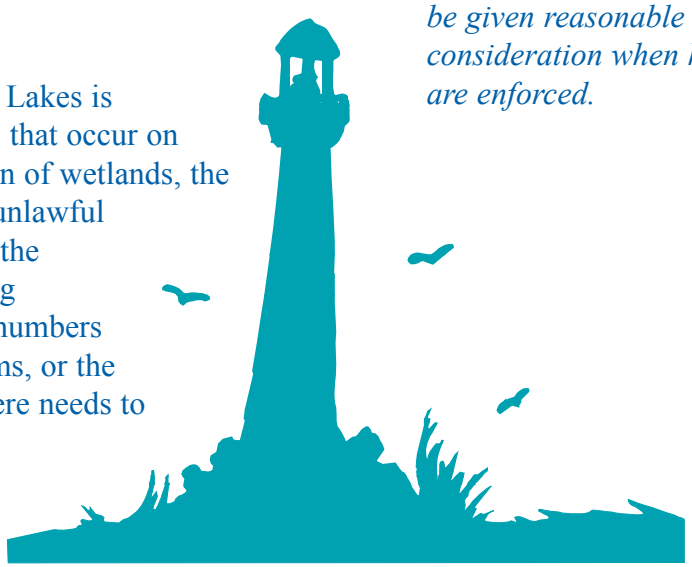
The effects of declining Lake levels on shorelines attracted the attention of a group called Save Our Shorelines, which testified in force at the Task Force hearing in Saginaw. This group, which consisted mostly of shoreline homeowners, expressed frustration that they were not allowed to mitigate the effects of declining water levels on shorelines adjacent to their property. Several members of the group had purchased their property before water levels had declined to their present point and wished to continue to have clean, sandy beaches in their backyards for their use and enjoyment.

Findings

The water quality of the Great Lakes is intimately connected to activities that occur on land. Whether it is the elimination of wetlands, the paving over of open spaces, the unlawful discharge of animal manure into the state's waters from animal feeding operations, the creation of large numbers of on-site sewage disposal systems, or the mining of coastal sand dunes, there needs to be a fuller appreciation of the interconnections between the land and the water. While significant progress has been made in protecting and improving the water quality of the Great Lakes, such progress threatens to be seriously undermined by new challenges relating to the interface between land and water. In addition, the state must work harder to find a balance between preserving habitat during periods of low water levels and recognizing the desires of beachfront homeowners to have access to clean, sandy beaches.

Recommendations

1. *The wetlands inventory called for in current law should be completed.*
2. *The Legislature must review the wetlands law, including the mitigation policy, and the status of enforcement policy in Michigan.*
3. *The Legislature must review the need for comprehensive new laws that require the protection of sensitive coastal areas as an integral part of the planning and zoning process.*
4. *A comprehensive water quality monitoring program that includes the monitoring of rivers and streams adjacent to concentrated animal feeding operations would allow for efficient and fair enforcement of laws forbidding illegal discharges.*
5. *New laws are needed to prevent the human population density of developing areas from exceeding the carrying capacity of existing or planned water infrastructure facilities.*
6. *The needs of beachfront homeowners must be given reasonable and consistent consideration when habitat protection laws are enforced.*



Fishery Health and Management

Principal Issue

The Great Lakes fishery is an important source of industry and recreation. The health of the fishery is a key indicator of the health of the basin. There have been significant problems associated with the fishery in the basin, and the state must strive to learn more about this valuable resource in order to properly conserve it.

Background

The fishery of the Great Lakes has always been an important source of food and recreation for Michigan's citizens. Commercial fishing began around 1820 and consistently expanded by 20 percent each year to a point where the largest harvest recorded was 147 million pounds in 1889 and 1899. The once abundant lake trout, sturgeon, and lake herring, however, have been replaced by other introduced species and according to the EPA, "only pockets remain of the once large commercial fishery. Commercial fishing in the Great Lakes has been under constant pressure from several fronts." Principal among these is the presence of toxic contaminants and aquatic nuisance species (ANS) in the Lakes. The sport fishery also developed quickly as pacific salmon were introduced into Lake Michigan. By 1980, other exotic fish had been introduced into the basin as it became popular to experiment with other nonnative species in an attempt to bolster the industry. Many of these attempts at stocking failed. However, sport fishing still remains a significant industry in Michigan as the Department of Natural Resources (DNR) estimates that recreational fishing is the largest and highest valued use of the state's fishery resources, with the economic impacts of sport fishing being in excess of $1.4 billion annually.

Despite the acknowledged importance of this resource, there have been dramatic fluctuations in the health of the Great Lakes fishery. As a way of gauging the health of the fishery and communicating this information to the people of the state, Michigan began its fish advisory program in the 1970s. According to the Michigan Department of Community Health (DCH), since that point, fish have become generally much less contaminated from traditional forms of pollution. PCB levels, for instance, have gone down in Lake Michigan fish by 90 percent since 1975.

However, many of these chemicals have long-lasting effects in the fish and demonstrated impacts continue to be seen in the fishery yet today. Extracting a page from the annual fishing advisory, one observes that the DCH has issued a special advisory for all inland lakes in Michigan due to mercury contamination. For example, child-bearing women and children under the age of 15 are cautioned not to eat even one whitefish caught from Lake Michigan. Mercury does occur naturally; however, burning wastes and coal along with the improper disposal of mercury-containing materials also releases mercury. Fish pick up mercury as they eat and absorb it from the water. Larger predatory fish tend to have higher mercury levels.

In addition, the fishery has been tremendously affected by other more aggressive forms of pollution which have yet to be fully measured. As noted elsewhere in this report, one of the most recently acknowledged threats is the increase and spread of ANS. ANS dramatically affect the ecosystem of the Lakes, throwing off the natural balance of the Lakes by competing for habitat and disrupting the food chain.

Though the DNR regulates the day-to-day management of the state's fishery, much regulatory authority still remains with the Legislature. Recent proposed legislation such as the Aquatic Species Protection Act has attempted to delegate authority to make decisions on fishery health issues to the

Natural Resources Commission (NRC) (under the premise that the NRC, earlier charged under Proposal G of 1996 to regulate the taking of game using sound science, would be more consistently mindful of the proper conservation of the resource).

> "Perch is still problematic, especially in Lake Michigan, and on the commercial side, the result has not been so good with significant impacts on whitefish."

Regardless of who or what body manages the fishery in the basin, there apparently is a consensus that the state needs additional data collected through fish surveys. Most argue that the current surveys need to provide more consistent information in order to monitor the fishery. According to a DNR evaluation report, creel surveys are conducted at numerous Great Lakes ports and on inland waters each year in Michigan to estimate angling effort and catch. The DNR has made important strides in its efforts to create a more diverse fishery, but important data, particularly on the impact of ANS, is needed to continue to focus the department's efforts.

There are also problems with the impact of hydroelectric dams on fishery health. Many believe that it is critical that the large number of dams in Michigan are either adequately maintained or removed to help assure a healthy fishery. Hydroelectric dams are considered by many experts to be one of the most limiting factors in fishery management. Dams can negatively impact river ecosystems, fish habitat, and fish reproduction through river flow or temperature alterations, blocking fish movement, or impeding the natural cycling of nutrients throughout the river. Throughout Michigan's river systems, fisheries managers must compensate for 103 hydroelectric dam facilities and approximately another 2,500 state, local government, and privately owned dams and barriers.

Testimony

Fishing, because it is such an accessible activity, is a common point of access to the Lakes for the people of Michigan. It is not surprising then that many people talked about the need to pay closer attention to conserving this resource. DNR Fisheries Division Chief Kelley Smith testified at the Rogers City hearing that he believes that the general state of the fishery has been good with some problems due to competing uses. "Perch is still problematic, especially in Lake Michigan, and on the commercial side, the result has not been so good with significant impacts on whitefish."

The annual Fish Advisories issued by the DCH have become a point of contention for many, particularly environmental and conservation groups in the state. As evidenced by testimony at the hearings, some argue that the advisories are not well communicated and that the public is not aware of the real dangers of eating fish caught in certain waters of the state. Jimmy Lewandowski, from Jimmy's Boat Livery in Harrison Township, and Fred Fuller, St. Clair Drain Commissioner, expressed their concerns with the fish advisories and the lack of effort that has been made to inform the public about them. Mr. Lewandowski talked about the thrill he felt when he got his first fishing license, and how frustrated he has become with all "the contaminants, warnings, and regulations with the fish today."

Terry Miller, of the Lone Tree Council, was also concerned with this issue. He explained that the fish advisories are not inclusive enough and that other states are more precautionary. He testified that Michigan must take more steps to educate its citizens. He provided an example of Alma College students conducting a survey on anglers catching fish and discovered that "many of them were eating the fish that were covered under extreme fish advisories. Not many knew about the dangers. The advisories are either not distributed, ignored, misunderstood, or inconsistent with present research."

Mr. Miller believes that there must be strong, permanently posted signs at boat ramps and popular fishing locations that would supply citizens with the current advisories and guidance for cleaning and cooking the fish. It would also create awareness to help develop a consciousness of water quality.

As noted in a separate finding in this report, the presence of ANS threatens the survival and diversity of the Great Lakes fishery. This was a general concern expressed throughout the hearings. Forrest Williams, from the Michigan Fish Producers, explained that the whole food web has changed as a

result of ANS. Captain Janice Deaton, of the Michigan Charter Boat Association, also expressed her concern about ANS because zebra mussels have spread to depths once thought impossible for their survival, and they affect the food cycle.

Marc Gaden, from the Great Lakes Fishery Commission, provided a few recommendations at the Saginaw hearing regarding ANS. He believes they should be stopped because of the profound effect they have on the whole Great Lakes ecosystem. He recommended specifically that sea lamprey control efforts be maintained because of the enormous destruction they have on fishery health.

On the issue of what entity or authority should provide long-term management for the state's fishery, Dana Debel, from the Michigan United Conservation Clubs (MUCC), explained that the MUCC had been in support of a proposal to create the Aquatic Species Protection Act "for a long time." The proposed act would codify the current 22 statutes and turn management authority from the Legislature over to the NRC and the DNR. The MUCC would like to see managers who understand the science of fisheries actually manage the fishery resource. However, in contrast, Forrest Williams opposes the current efforts which give legislative power to the NRC because it would remove the link between the citizens and the lawmakers, and also because in his mind, it would be altering Article IV, Section 52 of the Michigan Constitution, which delegates to the Legislature the responsibility to protect the state's natural resources.

There is a general perception among some that the DNR's fishing surveys are inadequate for the information that the public needs, particularly those whose livelihood depends on fishing. Terry Picard, from the Lake St. Clair Walleye Association, commented on this issue saying that he believes the DNR does a good job of management but does not conduct enough studies in the state, particularly in southeast Michigan. Several others at the Rogers City hearing echoed this comment and suggested ways of supplementing DNR surveys by enlisting the help of local fishing clubs and retirees through creel surveys.

Finally, on the issue of dam policy in the state, Kenneth Merckel, from the Steelhead and Salmon Fishermen's Association, and Dana Debel both commented on the need to remove some hydroelectric dams from Michigan's rivers and tributaries. They both believe that the dams are one of the main limiting factors of the health of the fishery in the state and if they were removed, it would allow the fish to move into prime habitat and improve river systems. Ms. Debel urged the state to maximize its limited resources in dam management by removing some dams, even though the cost of removing a dam is estimated to be around a million dollars. Rich Bowman, of the Michigan Council of Trout Unlimited, committed his organization to working with the state to have some dams removed and to ensure that barriers for sea lamprey control are properly maintained.

Findings

The health of the fishery is a widespread concern of Michigan's citizens. There are human health concerns associated with fish advisories as well as ecosystem concerns associated with the impact ANS have on the food web. The state needs to work to gather more information from creel surveys and to conduct more research on hydroelectric dams and their impact on the fishery. Steps should be taken to ensure that sound science is used in the management of the fishery.

Recommendations

1. *Review the current Michigan Fish Advisory to see whether it is consistent with other basin state advisory programs. Look for new ways to inform the public of fish advisories, possibly through postings at boat ramps and popular fishing locations.*
2. *Ask the DNR to review its dam management program to ensure that fishery health is properly taken into account when decisions about dam removal and/or maintenance are made.*
3. *Consider the establishment of a local creel survey program that would supplement the current DNR fishery surveys. This local component would work with DNR information-gathering methods to ensure a consistent base of statewide information. This information must then be effectively communicated throughout the state.*
4. *Consider legislation similar to the proposed Aquatic Species Protection Act to ensure that long-term management decisions are made in the best interest of the health of the fishery.*

Recreational and Commercial Access to the Lakes

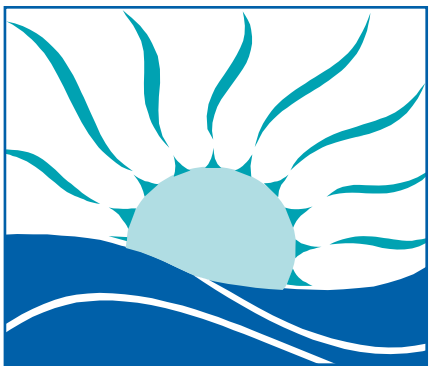
Principal Issue

The state has important responsibilities in maintaining public access to the Great Lakes for both commercial and recreational use. These uses must, however, be managed properly to conserve the resources in the basin. Those who access these resources also have an obligation to support their uses through sound environmental practices and financial support.

Background

One of the most important benefits of living in Michigan is the vast amount of shoreline exposure to the Great Lakes making this resource readily available for use by the public. The state holds the Michigan waters of the Great Lakes in public trust for the welfare of the citizens of the state. In this regard, the state has an important role to play in ensuring that it makes the resource available while at the same time safeguarding its integrity.

State land acquisition and preservation programs have a long history in Michigan. In 1939, the State Legislature first earmarked funds from increased fishing license fees to purchase water frontage. Changes to the funding for the development of access sites were made in 1968 to direct a portion of marine fuel taxes and a share of boat registration fees paid by recreational boaters. In addition, annual appropriations from the Natural Resources Trust Fund are used to purchase land for public use and enjoyment. The Department of Natural Resources (DNR) also maintains a Boating Facilities Grant Program that allows local units of government to work with state funds for the design and construction of boating facilities.



However, changes in Lake levels over the years have presented new hurdles for the state in its mission to ensure ready public access. Most recently, the steady decline in Lake levels has made the dredging of harbors and marinas a key priority.

Dredging involves the removal of bottom sediments to increase water depth and the placement of dredged material in a new area. However, dredging activity can have significant environmental impacts. Sediment kicked up by dredging may cover spawning areas and smother fish eggs of species like yellow perch and smallmouth bass. Dredging, and the disposal of dredged sediments, may disrupt benthic (bottom-dwelling) aquatic plant and animal communities that are important in the Great Lakes food chain. Dredging may also disturb contaminated sediments in the water as well as expose contaminated sediments that had been buried under cleaner sediments, increasing the exposure of aquatic plants and animals to these pollutants.

Dredging in the Great Lakes along Michigan's shoreline requires a permit from the U.S. Army Corps of Engineers and the Michigan Department of Environmental Quality (DEQ). The U.S. Army Corps of Engineers regulates Great Lakes dredging and construction of docks, piers, and other obstructions under section 10 of the federal Rivers and Harbors Act (33 USC 403). The DEQ regulates dredging and other activities on Michigan's Great Lakes bottomlands under Part 325 (Great Lakes Submerged Lands) of the Natural Resources and Environmental Protection Act (1994 Public Act 451; MCL 324.32501-324.32515). The U.S. Army Corps of Engineers and the DEQ have a joint permit process so that only one form must be filled out and

submitted to either of the two agencies. The U.S. Army Corps of Engineers is also authorized to maintain major harbors and navigation channels at minimal depths for shipping.

During low Great Lakes water levels, the demand for dredging permits increases dramatically. In 2000, the DEQ reported that from January 1 to April 30, permit applications increased 70 percent over this same time period in 1999 and 240 percent over the same time period in 1998. In 2000, both the U.S. Army Corps of Engineers and the DEQ did their best to facilitate the quick approval of permit applications. Both agencies used existing procedures to quickly process similar small requests like canal and marina dredging. However, even when applications are complete and without any complicating considerations like the presence of toxic contaminated sediments, it can take over a month between the time an application is received and the time that dredging may commence.

In Michigan, the Legislature enacted a loan program that allows marina owners to access funds through commercial banks at state-subsidized low interest. Although the loan program has been helpful, some have observed that many marina owners have suffered significant financial damages due to slow turnaround time on permit processing and lack of available funds.

Another significant challenge facing the state as it seeks to manage access has been the continuing controversy over tribal fishing rights in the Great Lakes. The Consent Agreement that had governed tribal fishing since 1985 expired at the end of May 2000. On August 7, 2000, the DNR announced a new agreement embodied in a consent decree signed by Judge Richard Enslen. This agreement provides for new plans to rehabilitate lake trout in Lake Michigan and Lake Huron and for the tribes to remove more than 14 million feet of annual large mesh gill net while preserving significant tribal fishing opportunities in the Lakes. Two of the principal features of the agreement are a Technical Fisheries Committee and a Law Enforcement Committee, which will attempt to resolve both science-based and law-based questions that arise as the agreement is carried out.

Despite good intentions on behalf of all the parties to the agreement, there has been lingering concern over perceived shortcomings in the agreement. Some have expressed concern over whether the agreement will also be interpreted to apply to inland lakes, others have expressed dismay over the lack of regulation for markings of nets, and still others maintain that the tribal fishing opportunities in the Great Lakes will deprive both commercial and recreational fishermen of their livelihood.

> "The state needs to continue to provide access opportunities for both public and private entities."

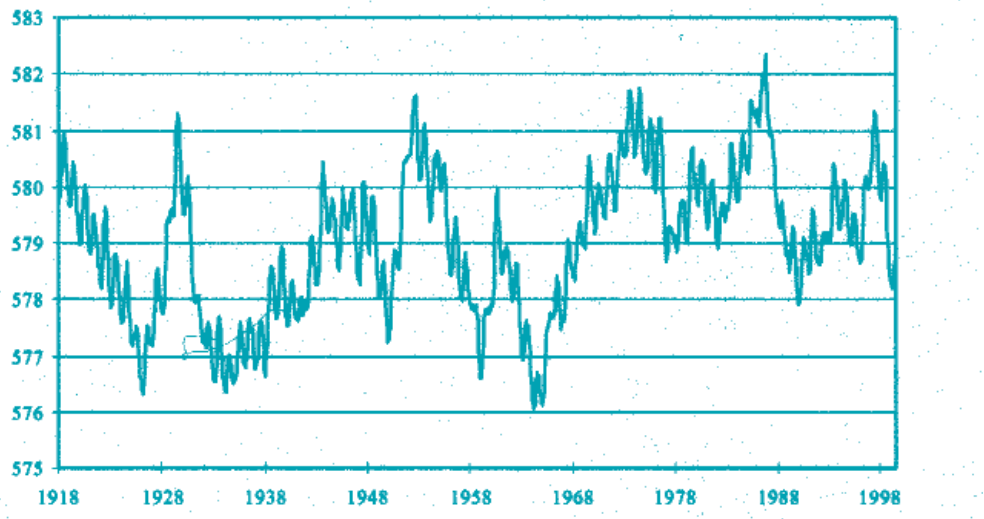
A final access-related concern expressed during the hearings involved new types and levels of recreational uses in the basin. Impacts from new or expanded activities such as jet skiing and a variety of off-road vehicles (ORV) need to be accounted for and properly regulated. License fees paid by hunters and fishermen are meant to cover impacts on habitat, but some have observed that some of these new activities do not provide for similar reimbursement back to the resource. There was general agreement that one long-time use in the basin — commercial fishing — does not cover its impact on the resources. Commerical fishing fees are very nominal and need to be revised. The DNR manages state land access and does receive revenue from such programs as snowmobiling and ORV use for trail maintenance work. However, the traditional user groups believe that more could be done to assess some type of access or user fee so that impacts are accounted for equitably.

Testimony

There were several individuals who presented testimony that the state has an obligation to continue to provide more public access points. The principal concern being felt by these people is that it is becoming increasingly difficult for non-riparian owners to gain access to the waters of the state. With the increasing value of lakefront property in Michigan, opportunities for access are diminishing, and many boaters and other water users must rely upon the state for this access.

As Chuck Pistis, from the Michigan Sea Grant, explained at the St. Joseph hearing, "the state needs to continue to provide access opportunities for both

Water Level Fluctuations on Lake Michigan and Lake Huron



Source: Produced by the Legislative Service Bureau Science and Technology Division based on data from the U.S. Army Corps of Engineers.

public and private entities." He explained that there is tremendous pressure in Michigan for more access to the Lakes and the DNR has difficulty getting access sites set up without state or federal support.

Ray Underwood, from the Michigan Boating Industries Association, also made a similar point at the Monroe hearing and urged the Task Force to continue to work to provide access.

However, one of the most pressing issues facing the state and the federal government, based on the testimony taken by the Task Force, was the need to maintain safe access to the Lakes through dredging. With continued low Lake levels, both public and private harbors and marinas need faster turnaround time on dredging permits. Laurie Delekta, from the LaFarge Cement Company, summarized her company's losses in shipping capacity due to the drops in the Lakes. According to Ms. Delekta, “648,000 tons of cement shipping capacity is lost annually. The most significant problem we have had is with the DNR and the DEQ to get permits to dredge our quarry."

Ray Underwood also added concern to this issue. He described the DEQ's use of deed restrictions when a marina conducts a dredging project. He believes that the department places too many restrictions on dredging projects, and these restrictions will eventually lead to more and more marinas “drying up and becoming sites for condominiums."

Additional discussion of the dredging issue occurred during the St. Joseph hearing when talk centered around the distinction that the U.S. Army Corps of Engineers makes between dredging for commercial and recreational harbors. Several wanted the Task Force to know that recreational harbors should receive similar attention by the U.S. Army Corps of Engineers. Chuck Pistis also provided testimony on this issue. He explained that there is a gap in the federal government's assessment of a harbor (for dredging purposes) when evaluating recreational uses.

Captain Janice Deaton, of the Michigan Charter Boat Association, provided testimony at the Port Huron hearing about the dredging issue in relation to private marinas. She explained that the low water levels have resulted in marinas being closed and that it is hard to get funding to dredge private marinas. “Charter boat owners have had to move to public marinas as a result."

On managing the current developments under the new Tribal Fishing Consent Agreement, the most significant amount of testimony was taken at the Rogers City hearing. Several fishermen and other citizens from Rogers City expressed dismay at the conditions under which the agreement was negotiated by asserting that there was much secrecy in the whole process and that it was difficult to get information on what was really going on during the negotiations. When the consent agreement was announced, many felt deprived of an opportunity to make comments and wondered on whose behalf the state was negotiating during the talks.

On the impacts of the treaty itself, Rogers City

Harbor Master Ken Rasche relayed how nervous the people of Rogers City are with all the fishing and recreational boating traffic in the Lake and the poorly marked nets that will not be required to adhere to new marking requirements until 2002. This gap in regulation caught the Task Force's attention, and several questions centered around why the gap existed and how dangerous these poorly marked nets have become. R. Bruce Haywood recounted the tragedy of the sinking of a small fishing boat caused by poorly marked nets. There were several concerns with how tribal gill net fishing interferes with recreational fishing. Terry Picard, from the Lake Erie Walleye Association, spoke at the Monroe hearing against gill net fishing in the Great Lakes. He believes that it is an “indiscriminate way of taking fish." He understands that it will take time to eliminate more miles of gill nets through the tribal treaties but believes it has to be done.

Forrest Williams, from the Michigan Fish Producers, was concerned with the 2000 Tribal Consent Agreement and its impacts on state-licensed fisheries. He believes that the agreement was made to compensate the fishermen that have been affected by tribal fishing. The Michigan Fish Producers support the component of the agreement that says the state has to “buy out” those fishermen affected by tribal fishing in the Great Lakes. Mr. Williams explained that they support such a buyout if the state gives just compensation to allow those affected in the fishing industry to explore other options and if all the fishery is to be given to the tribes. Mr. Williams was also concerned with state laws on net markings. He believes that the state could have better relations with the sportfishing community if the laws were reviewed and improved to be consistent with sportfishing and tribal fishing alike.

Other impacts of the new treaty were expressed in testimony on whether current fishing opportunities in inland lakes might become subject to the agreement. Mr. Haywood, in response to a question from Senator Hammerstrom, explained that this question of application of inland lakes is being negotiated right now, with parties submitting briefs to federal court in Kalamazoo.

Finally, on the issue of other users helping to support habitat maintenance and restoration projects in the basin, Forrest Williams indicated that the Michigan Fish Producers did support an earlier proposed increase in commercial fishing fees. Others believe that more needs to be done to assess the new and expanded recreational uses in the basin and to charge appropriate fees to help cover costs.

Findings

The state must continue to provide safe and enjoyable opportunities to access the Great Lakes, both for recreational and commercial use. Fluctuating water levels and other changing conditions in the Great Lakes present a real threat to both commercial and recreational access to the Lakes. In addition, there are many varied recreational and commercial uses of the resources in the basin that must be managed properly to ensure that one group or use does not deprive other users of an equal right to access in the basin.

Recommendations

1. *Review the joint dredging permit program to determine whether certain permit applications can be expedited.*
2. *The DNR's public access program, as referenced on their current web site, is dated 1995-96. This public access program should be reviewed to determine whether the department can do even more to locate new opportunities for public access.*
3. *Fish net marking requirements need to be reviewed. Although the net marking requirements found in the recent Tribal Fishing Consent decree are outside of legislative purview, there are outdated state law marking regulations that could be revised.*
4. *Implement a new commercial fishing fee that covers the real impacts of this activity on the fishery, thereby reducing the state's reliance upon fees paid by recreational fishermen.*

Federal, State, Local, and International Interactions in the Great Lakes Basin

Principal Issue

There are eight states, two Canadian provinces, and the federal government that have distinct jurisdictional authority in the Great Lakes basin. Each of these levels of government have statutory authority to regulate environmental programs in the basin, and laws frequently differ from region to region. Joint agreements and treaties have been negotiated between these various entities in an attempt to coordinate policy, but significant questions still remain over how to resolve conflicts between regulatory standards and jurisdictional boundaries.

Background

Begin with eight Great Lakes states, each with varying degrees of differing Great Lakes regulatory programs, add two Canadian provinces, and mix in a host of Great Lakes and water quality laws administered at the U.S. federal government level and you end up with a recipe for a true "patchwork" regulatory program within the basin. Differing pollution standards, clean-up approaches, spill reporting plans, and drilling regulations all are the result of this hybrid regulatory program.

Although the federal government has delegated significant authority to the states to run their own environmental programs (such as the various programs developed under the Clean Water Act [CWA]), because of the multi-state nature of the Great Lakes basin, these programs are subject to being superseded both in application and in legal interpretation by federal law. An example would be the state's authority to prevent water pollution under Part 31 of the Natural Resources and Environmental Protection Act (NREPA) and the broad exemption for ballast water granted by Congress under the CWA.

In addition to varying approaches within the context of current law, this dilemma has also resulted in the stymying of proposed legislation on a state level due to the concern for adding new individualized components to the regulatory puzzle. This conundrum is no better portrayed than in the recent discussion over the passage of Senate Bill 152, Senator Sikkema's ballast water control legislation.

During the two-year debate on this bill and on an earlier version (Senate Bill 955), much of the talk focused on the need to implement a basin-wide program that would be more effective than one state taking a "go-it-alone" approach. Many observed that though the bill would have merit, its result would be drastically minimized without adopting similar legislation in the other jurisdictions.

Perhaps the most fundamental component of this debate in the United States centers squarely on who has the authority to regulate natural resources issues in the basin. Up until recently, those advocating states' rights and those supporting a federalism approach coexisted without significant conflict. But recent legislation authorizing a two-year moratorium on directional drilling in the basin signed into law by President Bush directly conflicts with the move by the Department of Natural Resources (DNR) Director and the Natural Resources Commission to resume directional drilling beneath the Michigan waters of the Great Lakes.

As mentioned, attempts have been made in "smoothing" the transitions from one jurisdiction to another within the basin. Interbasin agreements such as the Great Lakes Water Quality Agreement and the Great Lakes Charter have done much to coordinate policy. In addition, there are significant policy development bodies, such as the Great Lakes Commission and the International Joint Commission, within the basin that have attempted to urge further cooperation.

The recent debate on the proposed Annex 2001 is an attempt that shows both the potential for improving a coordinated basin policy and the pitfalls

that are often encountered in reaching a consensus.

One of the most significant hurdles that policymakers in Michigan must overcome in making changes at the federal and international level is the difficulty in convincing those bodies that the Great Lakes are a key asset that must be protected. Funding for various environmental programs, such as the control of the sea lamprey, fluctuates from year to year. International treaties, such as the North American Free Trade Agreement focusing on improving the flow of trade in North America, have implications for states attempting to conserve water resources. These hurdles in Washington and elsewhere could become even more problematic with the reduction in representation that will soon occur due to the most recent census. With the emerging population shift away from the Midwest, more political clout will soon exist in areas that thirst after Great Lakes water. This development puts added pressure on policymakers to work with more urgency and, hopefully, in a more coordinated fashion to implement more protective programs, similar to recent legislation protecting the Florida Everglades.

But despite problems, there have been significant success stories that point to how well-coordinated programs can have an impact. The Areas of Concern (AOC) program run by the EPA relies heavily on a federal, state, and local partnership. Governed largely by federal controls and funding, the AOC program identifies strategic environmental remediation sites and works to establish Public Advisory Councils that then enlist citizens, business and civic groups, and the state regulatory agency to customize a local cleanup program within those parameters.

Much can be learned by listening to local officials and their involvement in state and federal programs. As the federal government delegates to the states and the state in turn delegates down to the local unit of government, more and more of the most important work to protect water quality takes place at the local level. A prime example of that phenomenon is the recent focus on water quality monitoring and trying to assess the sources and extent of water pollution. Many observers believe that paying attention to, and better coordinating, local needs on a watershed management basis will yield demonstrable benefits for the basin as a whole.

Testimony

There is little doubt that the individual states and provinces within the basin want and need to have an impact on policymaking. In order to meet their own obligations to the people to protect the resources, states such as Michigan have taken the initiative to fashion their own unique programs, often with the delegated authority from the federal government. During the hearings, people generally supported this "state-rights" approach as a way of developing new programs that might be emulated in other jurisdictions. Many commented on the passage of

There needs to be "a strict assignment of boundaries on federal activities" and these boundaries need to be maintained.

Senate Bill 152, Senator Sikkema's ballast water legislation, as an example of the state doing the right thing and, in effect, encouraging the federal government to follow suit.

Bruce Grant, from the Hammond Bay Anglers, thanked Senator Sikkema for his work on this bill and the impact that it should have on improving the state of the fisheries. Terry Picard, from the Lake St. Clair Walleye Association, in his warning of the dangers of aquatic nuisance species, expressed his appreciation for the state's efforts in passing Senate Bill 152 and hoped that there would be help coming soon from the federal government because the problem impacts the entire region.

There were several who mentioned that the federal government often does not fully support state activities. Kenneth Merckel, from the Michigan Steelhead and Salmon Fishermen's Association, commented on the issue of encroachment of the federal government on state resources. He believes that there needs to be "a strict assignment of boundaries on federal activities" and that these boundaries need to be maintained.

In addition to state and provincial efforts, the Task Force also recognized that local units of government working with private citizens can have a tremendous

impact on improving conditions in the basin. There were many examples of innovative local programs that the state and the federal government could continue to support. These programs, such as Macomb County's septic tank inspection ordinance or the regional water monitoring system mentioned in Adelle Pleatman's testimony at the Roseville

The principles of conservation and restoration of the natural resources of the ecosystem of the Great Lakes have guided the development of Annex 2001.

hearing, were often customized for local conditions but could provide direction for others in the basin.

The Task Force appreciated the initiative demonstrated in these attempts but at the same time was well aware of previous attempts to push the federal government in certain policy directions. The state's experiences with attempting to regulate out-of-state waste in the 1980s and 1990s demonstrated a continuing problem that exists when one state tries to impact policy that has ramifications outside its borders. Others cited federal dredging programs that are not always mindful of important recreational uses of harbors and inconsistent funding of sea lamprey control programs as examples of the federal government not always "tuning in" to the needs of the region.

Inconsistencies in the basin still exist, and more can be done to coordinate policy, acknowledging that the greatest impact can come from all states and provinces and national bodies working together.

In his testimony on spill potential in the Great Lakes, Mark Richardson, from Mt. Clemens, noted that there are real disparities between U.S. and Canadian spill reporting practices. Research done by the Legislative Service Bureau's Science and Technology Division confirms that spill reporting may be more of a discretionary, subjective standard in Canada than the protocol followed in U.S. waters. Doug Martz, from the Macomb County Water Quality Board, commented that the board never received any notification of spills coming from Canada and gave a specific reference to the ICI Chemical Plant spill coming from Ontario. Others commented on differing pollution standards as they impacted multi-national remediation efforts.

Some indicated to the Task Force that Canadian efforts to protect the Lakes may be less aggressive than those followed in U.S. waters but that often they are motivated more by the ethic of doing the right thing for the Lakes than out of the need to enact and follow statutory guidelines.

States' and local efforts should not be discouraged. However, there should be additional attempts made in coordinating these efforts. The various national and international bodies that help to guide actions within the basin, such as the Great Lakes Commission and the International Joint Commission, could help in this regard. Recent proposals discussed in Michigan and Illinois to create a region-wide Great Lakes Legislative Caucus would allow state legislators to discuss "local" success stories and bring them back for consideration in other basin states.

This is not to say that there have not been important agreements and programs fashioned between the federal government, the states, and Canada. The Water Resources Development Act of 1986, the Great Lakes Charter, the Great Lakes Toxic Substances Control Agreement, the Great Lakes Air and Water Quality Agreements, and foundational treaties such as the Boundary Waters Treaty and the Convention of Great Lakes Fishery all have helped to forge a common interest in the welfare of the basin into effective policy.

As noted earlier, the recent multi-national effort to design and implement a common water use program in the basin through Annex 2001 demonstrates the potential for linking the various governing authorities. The work to develop this proposal is motivated by the recognition that new pressures in Washington may work to free up Great Lakes diversions for other parts of the country. With political powers shifting in Washington and fresh water being regarded as an item of commerce, the basin states and provinces need to have a legally defensible plan in place to defend against large scale diversions that threaten the welfare of the Lakes. The principles of conservation and restoration of the natural resources of the ecosystem of the Great Lakes have guided the development of Annex 2001. This issue of advancing Annex 2001 when coupled with the

development of a state water use statute drew much support throughout the hearings.

Tanya Cabala, of the Lake Michigan Federation, sees water diversions as one of her organization's main issues. “Water diversions are a serious threat to the Great Lakes, and we see political power shifting away from the Midwest. It is critical that we push for Annex 2001 so that we have a state water use law in place to guard against diversions." Then-Acting Director of the Office of the Great Lakes Keith Harrison listed support for Annex 2001 as a chief priority for the state, and this was later confirmed by current Office of the Great Lakes Director David Ladd when he testified in support of Annex 2001 by indicating that “the current standard to guard against diversions is likely to fail a constitutional challenge."

The process of developing Annex 2001 has included the Council of the Great Lakes Governors and will need to include ratification by all state legislative bodies, congressional approval, a provincial agreement, cross-border accord, and additional state legislation to implement the various regulatory provisions. This undertaking, if successful, demonstrates the great potential for interbasin cooperation that can lead to additional protections for the Lakes.

Findings

There are significant local, state, federal, and international interests at work in the Great Lakes basin, each having jurisdictional issues that need to be addressed. However, the multi-jurisdictional nature of the basin should not be an excuse for Michigan not to exercise its own authority to act in the interests of protecting the Great Lakes. Michigan can and should be a leader in shaping basin resource policy.

The efforts of local and state governing bodies can and have resulted in important improvements to the Lakes. These efforts need to be supported and further encouraged. However, all share a common interest in coordinating a broader vision for the welfare of the Great Lakes. All affected governing bodies in the basin need to recognize that a coordinated plan to preserve the integrity of the Lakes should be a key priority, particularly in light of impending attempts to remove water from the basin. Passage of Annex 2001 should be held as a key priority for these bodies and should be used to provide a foundation for additional coordination of future Great Lakes policy.

Recommendations

1. *Consideration should be given to the idea of creating a Great Lakes Legislative Caucus, which would help to facilitate meetings of key state and provincial policymakers within the basin to discuss innovative new programs that have the potential for application to other states. The Environmental Council of the States (ECOS) program at the federal level has demonstrated that innovative new programs developed at the state level can provide significant national level improvements.*
2. *An appropriate body, such as the Great Lakes Commission or the International Joint Commission, should continue to provide basin-wide perspectives on where gaps or inconsistencies exist in basin policy. This body would then continue to make recommendations for changes to the appropriate regulatory programs to ensure a consistent basin policy.*
3. *Annex 2001 should be made a priority for prompt passage as a strong and urgent signal to Washington that the integrity of the Great Lakes must be maintained and that there are significant forces engaged to protect the basin from diversions.*
4. *Michigan should be a leader in shaping both ratification language and accompanying legislation in order to effectuate implementation of Annex 2001.*
5. *Binational efforts within the basin must be maintained and further encouraged. They demonstrate the value of a partnership approach to protecting the Lakes and allow for an expanded vision of the worth of the Great Lakes.*
6. *All basin states and provinces should work to establish a common Great Lakes web site that would be used to house all research and documents related to the proper management and protection of the Great Lakes.*

Public Access and the Role of an Educated Citizenry

Principal Issue

There are significant concerns over how members of the public can maintain real access to policymakers. People living in the Great Lakes basin can and do act as key stewards of the Lakes, and there is a valuable role that an educated citizenry can play in helping to protect the Lakes. Policymakers need to be able to work with and coordinate the efforts of the public in their mission to protect the natural resources of the state.

Background

The highest authority to make decisions relative to natural resources protection comes from the Michigan Constitution. Article IV, Section 52 specifically delegates the authority "to provide for the protection of the air, water and other natural resources of the state from pollution, impairment and destruction" to the Legislature. In this charge, the framers of the Constitution, and thus the people of this state, have carved out a specific responsibility for the Legislature that cannot be permanently delegated away to another body. In carrying out this charge, the Legislature is obligated to take actions on behalf of the people of this state.

State agencies have also seen significant value in going out into the public and determining what issues are paramount in the public's mind. In the 1970s, 1980s, and into the 1990s, the Department of Natural Resources and the Natural Resources Commission took significant public input through numerous boards and commissions. Although several of these boards and commissions were eliminated through Executive Orders, the Natural Resources Commission still provides regular forums in various regions of the state for the public "to speak its mind" on major natural resources issues that affect the welfare of the natural resource base in the state. In addition, the Department of Environmental Quality (DEQ) regularly conducts public meetings around the state on a variety of issues and has made effective strides in reaching out to the public in other ways, such as through the creation of a comprehensive web site that posts numerous reports, background documents, and calendars of upcoming decisions to be made by the Director.

Although the Legislature acts in a public and open system through committee meetings, hearings, and session debate in Lansing, there are many who believe that to truly know what issues the people of the state would like to see addressed and how they are addressed, policymakers must make better attempts to access the public. The testimony provided to the Task Force indicated that many people still feel that more could be done to make access more convenient and consistent. Some have suggested that more local groups that meet regularly with legislators be created and when ideas are presented, that those ideas actually are factored into policymaking in Lansing. Some believe that "too many deals are made behind the scenes" and that the interest groups in Lansing often dominate policymaking, believing that it has become too convenient for legislators and other policymakers to listen to one or two influential lobbyists and ignore the wishes of the general public.

Given these concerns, it has appeared to be a refreshing exercise for both the Task Force and the public who took the time to attend the hearings held by the Great Lakes Conservation Task Force. One of the net results of these hearings held around the state is that they have been regarded as an effective way of learning what the people of this state want to see accomplished to protect the health and welfare of the Great Lakes.

Testimony

It is important first to acknowledge the significant undercurrent of the sense of appreciation for

conducting the hearings around the state. Many, such as Marina Peters from Bridgeport, Laurie Delekta from the LaFarge Cement Company, and Jackie Saturley at the Roseville hearing, were openly grateful for the efforts made by the Task Force in reaching out to the people. At the conclusion of the Marquette hearing, Penny Osher, the Ontonagon Village Manager, commended the Task Force members for "taking on this project of going out into the state and learning what the people of the state want to see."

One of the most visible forms of acknowledgment for the hearings came in the form of the many letters that were presented to the Task Force by Marquette teacher Karen Bacula. Over 100 letters from schoolchildren and their parents addressing oil and gas drilling issues were given to the Task force. These letters were generally thoughtful and obviously took time to research and write.

The public seemed enthusiastic and committed to taking advantage of this real opportunity to be heard. However, there was also important testimony presented indicating a mistrust of a certain segment of government. Task Force members were urged to, in the words of Kammie Dennis from the Presque Isle Tourism Council, "really listen to what we have to say."

Some, such as Jimmy Lewandowski from Harrrison Township, believed that the federal government is hiding information on water diversions occurring through the Chicago River, while people such as Buck Smith were told by out-of-state officials that "he should hold his tongue" on the presence of a toxic bloom in an Indiana reservoir. Even more adamant in the belief that government was not always accountable to the people was James Gilster, of St. Clair Shores, who testified that he was "outraged" over the recent vote of the Natural Resources Commission to lift the ban on directional drilling, and he wondered who they were really listening to.

Jackie Saturley observed that although the process of the hearings was much appreciated, she believes "that citizens will demand more input into decisions made by legislators and will mobilize more because they want ethics and decisions made in the best interest of the citizens." In Saginaw, Blaine Stevenson expressed his support for more involvement of the people of the state in public policymaking. "I believe we need to have more public referendums on critical issues facing the state, such as how we regulate water uses." Mr. Stevenson urged the Task Force to make the process more democratic by keeping the lines of communication open.

In Rogers City, Bruce Grant recalled a local fishing advisory council that had been established by former State Senator John Pridnia and urged the Task Force to closely examine how the people of Michigan provide regular input into government decisions. Mr. Grant believes that in enabling these local groups and really listening to what they have to say, more faith will be placed in the decisions made in Lansing. Finally, also in Rogers City, several fishermen expressed their concern at not being more fairly represented by those who negotiated the recent tribal fishing treaty on behalf of the state.

Despite the skepticism, there were significant signs that the public is willing to remain a key component of the forces engaged in protecting the Lakes. A common theme in all the hearings was the incredible amount of hard work put in by individuals, businesses, schools, and local officials to protect their stake in the Great Lakes. From working on public advisory councils in Areas of Concern to conducting local fish surveys, to putting pressure on state agencies to pursue cleanups, to creating new methods for teaching about natural resources in our schools, to doing volunteer water testing — the Task Force got a real measure of how involved the people of this state have been and can be when something they value is at stake.

Marguerite Cotto, from Northwestern Michigan College in Traverse City, stressed the important role that education can have in a variety of natural resources issues but stated that barriers to effective education on water issues are still there. She gave two examples of innovative approaches taken by local schoolteachers who have stepped beyond those boundaries and have effectively mentored children in the area of watershed management. Cindy Smith, from the Bay Sail Environmental Education program in Bay City takes area schoolchildren out into Saginaw Bay on the schooner Appledore and gives them a hands-on appreciation for the value of the water resources. At the same time, it shows them what simple steps they can take in their daily lives to protect that resource.

Commenting on the role that the Binational Public Advisory Council (PAC) has played in the Area of Concern in Saginaw Bay, Timothy Rosen explained

that the PAC is “a good example of how businesses, individuals, state, federal, and local agencies can work together for a common cause."

Mark Shea's L'Anse Creuse high school chemistry class took on a water testing project and has provided a good complement to the DEQ and other local water testing efforts. Jeanne Micka's efforts to save Lotus Island and Theresa Bea Flynn's 20-year work as the “eyes and ears of the U.S. Army Corps of Engineers” were good examples of how locally committed citizens can make a difference in conserving natural resources.

“The Redshirts” presence at the Roseville hearing showed how passionate local citizens can become when they feel their resources are being threatened. Steve Wojno, of Sterling Heights, told the Task Force about the extensive amount of research he has done on specific landfill issues and his belief that the DEQ has not been proactive in the area of cleaning up landfill problems.

Novel and innovative ideas were presented to the Task Force as to how both individual citizens and private firms could become more involved in making a difference. Mark Breederland and Chuck Pistis, of the Michigan Sea Grant Program, shared a related vision for the establishment of a public/private foundation that would be able to seek grants and donations for the betterment of the Great Lakes. Mr. Breederland's concept involved creating a foundation that would be funded by both state and private company dollars and noted that it could be modeled after the successful Ontario Great Lakes Renewal Foundation. The foundation would work to conduct research in three important areas related to the Great Lakes — the environment, economy, and history and culture.

Regardless of the specific direction taken by the Task Force in how they engage citizen action, it is clear that the public and private sectors both already play key roles in protecting the Lakes. There are many important successes already accomplished through local initiatives with or without adequate state assistance. But the state clearly has additional opportunities at its disposal to both reach out and really listen to the people and then work to support these ideas.

Finding

The people of Michigan live, work, recreate, and care passionately about the Great Lakes and the natural resources of the state and want to play an important stewardship role. This human resource is a vital tool that the state must acknowledge in its policymaking efforts. The Legislature and other policymaking bodies at the state level need to continue to reach out to the people of the state to assess their needs, ideas, and concerns. In doing so, the state has a role to play in supporting education and outreach activities that keep the people engaged in the process of protecting the Great Lakes.

Recommendations

1. *Views, ideas, and concerns of the public must be accessed on a regular basis to help to fashion new policy in Lansing. Out-state hearings on critical issues need to remain a viable tool for hearing what the people of Michigan want.*
2. *Web-based questionnaires should be used regularly by policymakers to obtain valuable input from the citizens.*
3. *It is important that the state continue to take steps to provide information to the public. The DEQ web site is a good example of providing ready access to reports, backgrounders, public hearing calendars, and other information. The Legislature should attempt to ensure that the public first understands the intricacies of the policymaking process and then has reliable information that will allow it to make reasoned decisions.*
4. *More steps need to be taken to support environmental education efforts in our schools. Innovative teachers and teaching methods that convey important information on water quality to our students need to be the rule rather than the exception. The Michigan Environmental Education Act could be amended to allow for a focus on the Great Lakes natural resources issues, and the Michigan Environmental Education Fund could be used to provide grant dollars of support for innovative teaching projects in this regard.*

Conclusion

There are few tasks more rewarding in the Legislature than the opportunity to go out into the various parts of the state and find out how the citizens of Michigan feel about their state. Whether the issue is crime control, education, welfare or tax reform, protecting the environment, or any other significant matter, the people of Michigan provide a wellspring of information and inspiration for policymakers.

At the conclusion of these eight public hearings and the submission of its report, the Great Lakes Conservation Task Force completed its assignment of going out into the public and assessing the needs and concerns of the people of Michigan on Great Lakes conservation matters.

The report contains a thorough narrative of over 20 hours of verbal testimony, along with a summary of written testimony provided to the Task Force through reports, memos, and E-mails. This testimony has been incorporated into the 17 issue briefs, findings, and recommendations of the Task Force as the central component of a Great Lakes Action Agenda. This action agenda will become the basis for immediate discussion by the Michigan Senate, and where appropriate, bills will be drafted based largely on these recommendations.

From that point, the citizens of the state will be asked to become engaged in the policymaking process once again. These broad recommendations will need to be further honed and refined to the point where the legislative process can continue to progress. Workgroup discussions, public hearings, and committee meetings will be used to listen further to what the people of the state would like to see in the form of policy changes.

This work will not be easy or quick. In some cases, a significant amount of additional local input will be needed. In others, new liaisons will have to be formed in an attempt to impact federal and international relationships. Mindsets and temperaments will have to be altered, and a new energy may have to be found to do the "right thing" to protect this wonderful resource. The Great Lakes have sustained us and our way of life for many generations, and we have not always shown them the respect and care that they deserve.

The partnership between the people of the state and its Legislature has devised a plan to care for the Great Lakes. The steps must be taken, and taken now, to carry out that plan.